The Builder.

No. CXXVII.

SATURDAY, JULY 12, 1845.

ARRANGEMENTS are being made, under the direction of Mr. Decimus Burton, preparatory to raising the colossal equestrian statue of the Duke of Wellington, now nearly completed by Wyatt, to its ill-chosen destination,—the top of the triumphal archway leading into St. James's Park. A strong inverted arch is about to be formed under the opening, and other precautions are to be taken to prevent unequal subsidence.

We fear it is too late to strive against the unwise determination to place the group on the structure in question; the press, as representatives of public opinion, were loud in their outcries against it at the time (1839) when a wooden model of the statue was set up, to the great alarm of wondering nursemaids and the crows; and, as their remarks were not then listened to, it is hardly likely, now that the arrangements are more forward, that the ruling powers will be induced to abandon their intention. Still we cannot avoid making one effort to that effect. The top of a triumphal arch, complete in itself, is not a proper place for a commemorative figure. One of two evils is certain to result: either the archway must be degraded into a mere pedestal, or the figure must lose its individuality and purpose, and become simply an adornment of the arch.

It was urged at the time we refer to, by those who wished to place the statue on the archway, that Mr. Burton, long before the Wellington statue was proposed, had suggested that a group of figures was essential to the completeness of his design; and it is very likely he did: but we will undertake to say he never desired a figure so large as entirely to destroy the importance of the structure, or, in fact, that it should be any thing more than an ornamental accessory. If they had made the structure the "Wellington Archway," and placed a quadriga, or figures, of a moderate size upon it, it would have been complete in itself and unobjectionable, excepting on the ground of *situation*; but by placing one monument on another, as they are about to do, degrading one without advantaging the other, they are, to speak in the mildest way, depriving the metropolis of one additional adornment, and committing a grievous mistake.

We referred to the *situation* of the archway. When it was first proposed to place the figure there, the writer of the present notice urged that it was objectionable as regarded the duke's own feelings. Behind Apsley House stands "Achilles," to the occasional embarrassment of him whom it honours; and now that his grace may have no means of escape by turning to the Piccadilly side of it, this second memorial is to be placed there to stare him and his guests out of countenance.

Observe, too, the position in which the group must stand; crossways, presenting the flank of the horse to all who pass beneath it,—as unprecedented as its effect will be unpleasant. Surely we have not so many public monuments in London that we can afford to sacrifice two at once? Let us leave the archway as it is, making it perfect, if you please, with accessory figures, and form a proper pedestal for the colossal statue in some of the many fine sites in London which require adornment.

Look at it in which way you will, the present intention is full of objections, and, if carried out, will prove a great reproach.

HONOUR TO ARCHITECTURAL LITERATURE.

THE Castle Hotel, Richmond, was on Monday last the scene of the most gratifying meeting we have had to record, namely, a public dinner given to Mr. John Britton, the indefatigable antiquary and topographer. The numerous fine works which that gentleman has produced, illustrating the architectural triumphs of England, have led to a well-merited expression of gratitude and admiration, not only from professors and students of architecture and engineering, but from literati, artists, and others.

To present Mr. Britton with a permanent testimonial of the high estimation in which his labours are held, a subscription has recently been opened, which already amounts to above 300*l*. The meeting on Monday was a supplementary feature of the project.

Owing to the unavoidable absence of Mr. Wyse, M.P., in consequence of the debate in the House of Commons on the Irish Colleges Bill, the chair was taken by the treasurer, N. GOULD, Esq., who conducted the business of the evening very efficiently. Near to him were seated Mr. Britton, the Dean of Hereford, the Rev. Dr. Ingram (President of the Trinity College, Oxford), Professor Hosking, W. Tite, V.P. of the Architects' Institute, Capt. Smyth, Lieut. Stratford, Mr. J. D. Harding, Dr. Conolly, Dr. R. Dickson, Mr. D. Roberts, R.A., J. B. Nichols, F.S.A., Mr. Lewis Pocock, F.S.A., Mr. Gaskoin, Mr. Wansey, F.S.A., and Mr. Rainy. Mr. Wm. Tooke, F.R.S., and Mr. Wm. Jerdan, the veteran editor of the *Literary Gazette*, acted as vice-presidents, and were supported by the Rev. Dr. Rees, the Rev. E. Tagart, Mr. Brayley, Mr. Maugham, Mr. S. C. Hall, F.S.A., Mr. B. H. Smart, Mr. Ingram, Mr. Corner, F.S.A., Mr. J. Timbs, and Mr. C. F. Whiting. There were also present, Mr. Fowler, Mr. Booth, Mr. Mair, Mr. Douthorne, Mr. Chapman, Mr. Herbert, Mr. W. Cubitt, Mr. Grissell, Mr. Dunnage, Mr. E. Hall, Mr. Crew, Mr. Sealy, and many others.

After the usual loyal toasts had been given, the CHAIRMAN, in proposing the health of Mr. Britton, expressed his regret that Mr. Wyse was prevented attending, as he would have been much better qualified to do justice to the subject. He, however, could speak of Mr. Britton from long acquaintance, having associated with him at a Board of Commissioners, to which for upwards of thirty years that gentlemen had been attached in the discharge of onerous duties, with their entire satisfaction and with honour to himself. Mr. Britton was not ashamed to have it known that he was of humble origin, and that he had not had the advantages of education in his youth; but he had been both the builder and the architect of his own fortunes, and by unwearied industry and perseverance he had succeeded, in spite of every disadvantage, in producing those works which had placed him in his present position. (*Great cheering.*) By a paper which he then held in his hand, he found that the number of those volumes was 66; besides numerous,—almost innumerable, essays; that they comprised no less than 17,122 pages; and such of them as had ever attempted to write even twenty pages would be able to appreciate the labour. The engravings in Mr. Britton's works were 1,866, and their beauty and accuracy were well known; and to come to a matter which he, as a commercial man, might be supposed to know more about, the money expended in these productions amounted to the enormous sum of 50,328*l*. (*Renewed cheering*). And all of these, it should be remembered, were essentially useful and instructive. That day was Mr. Britton's birth-day; on that day he entered upon his seventy-fifth year; and his whole life had been actively and industriously spent. He rejoiced to see amongst them on that occasion a gentleman whose name, in conjunction with Mr. Britton's, was well-known. He alluded to Mr. Brayley. (*Cheers.*) It was unnecessary for him to enlarge further on these topics. Whatever the testimonial to be hereafter given to Mr. Britton might be, he was sure the committee would give it with the same sincerity as he then proposed his health and happiness. He only regretted that he had no son to whom his virtues might descend, and who in pointing to his many works, and to the record of the measures then in progress, might say with pride, "that was my father."

The toast was drank with the greatest enthusiasm; the cheering lasted for many minutes.

MR. BRITTON, with much feeling, addressed the meeting as his "kind friends;" and said it had been his intention to have given them some lengthened account of his struggles and his exertions; but he found old age creep upon him, and having been suffering for a week past from indisposition, he felt that such an effort would be imprudent. He had never had the advantages of a collegiate or academical education; indeed, when he was about to commence his publications he was absolutely ignorant either of a grammar or a dictionary; but he was thereby induced to procure and study both books. He alluded to his confinement, in his youth, to the cellar of a wine-merchant, for six years, where he contrived by great industry to do as much work in six hours as his fellow-apprentice did in ten, enabling him to devote four hours so gained to mental improvement. Throughout his life his works had been received with much kind commendation; unkind remarks (which no man could escape), although he felt them at the time, only stimulated him to further exertions. He had consequently been able to publish the many works referred to by the chairman, and which he might say without arrogance were of utility and importance. Only one or two of them could be considered as of an ephemeral nature; yet although he had always made every effort to ensure the strictest accuracy, none of them had completely satisfied his own judgment. With reference to the testimonial proposed to be offered in kind approval of his works and his exertions, he had at once refused to accept a piece of plate, or any compliment of a pecuniary kind. He had confided the decision on that point to a committee, who he was convinced would adopt some plan which while it would be gratifying to himself would combine some benefit to art and literature. He thanked them for the cordiality with which they had received the toast, and trusted that the younger of them would be led by these proceedings to acts of emulation, and that they would all feel, like him, delighted, honoured, and gratified in the last hours of life. (*Great applause.*)

MR. W. TOOKE proposed the "Society of Antiquaries" in a short but able speech, which was replied to by DR. INGRAM.

THE DEAN OF HEREFORD, in proposing the health of the chairman, commented at considerable length on the works of Mr. Britton.

THE REV. DR. REES then gave the health of the honorary secretaries, Mr. Godwin and Mr. P. Cunningham, and took occasion to offer his testimony to the worth of Mr. Britton, and the value of his labours.

MR. GODWIN said, before he thanked them for the kind manner in which they had acknowledged the small services of his colleague and himself, he would, in pursuance of his duty as secretary, read a letter from Mr. Wyse, to shew that his absence had not proceeded from want of desire to be present. The letter was as follows:—

"House of Commons, July 4th, 1845.

MY DEAR SIR,—I have just learned from Sir James Graham, in answer to my question in the House this evening, that it is the intention of the Government to take the *Colleges Bill* (Ireland), the *first* of the orders of the day, on Monday. The bill being still in committee, demands the close and uninterrupted attendance of every Irish member, and I especially, from the long solicitude I have felt on the subject, feel myself more particularly *bound* to watch over its progress. This will compel me *most reluctantly* to sacrifice the honour and gratification I had anticipated in presiding over the dinner intended to be given to my friend, Mr. Britton. I cannot tell you or him how much I feel this disappointment; I had hoped it would have afforded the opportunity I have so long desired, of expressing my own sense of the many obligations which our

national antiquities owe to his zeal and intelligence, and have been the organ in so doing, of what I believe to be the sentiment of every one acquainted with his long and most meritorious and useful labours.

I also desire to be afforded an occasion, and none could present itself more favourable to the purpose, of calling the attention of the supporters and appreciators of our early arts to the want of which we all feel and deplore, of institutions for their preservation. The issue of my late motion in the House of Commons is proof of how much remains to be done, to place us in this respect in the position which we ought to occupy. The interest which the public takes is not, I trust, to be measured by the apathy of public men, and I cannot but believe I should have found an echo amongst the gentlemen whom I had hoped to meet, to my strong feelings on the subject.

Though compelled by this *mal apropos* to give up the pleasure to which I had looked, I hope you will not less believe I most warmly sympathize in the object of your meeting, and hope I may be afforded, on some future occasion, the means of enlarging these expressions of regard and respect to the object of these honours—Mr. Britton.—I am, dear Sir, yours very truly. THOMAS WYSE.

The same cause, continued Mr. Godwin, had kept Mr. Hume away, who had stated in a letter that he "was desirous to shew that respect to Mr. Britton, which his long and valuable services merit." He had also received letters regretting inability to attend from Lord Northampton, Lord de Grey, Mr. Cockerell, R.A., Mr. Barry, R.A., Mr. Uwins, R.A., Mr. Pickersgill, R.A., Mr. Neeld, M.P., Mr. Donaldson, Mr. Ludlow Bruges, M.P., Mr. Baily, R.A., and fifty others. The first-mentioned distinguished and amiable nobleman said in a letter to Mr. Britton: "I must conclude by wishing that you may long live to remember it as a satisfactory proof of the sense of your countrymen of your important services to the knowledge of medieval architecture." As regarded the office of secretary, he (Mr. Godwin) had accepted it as a duty,—as a slight acknowledgment of the advantage he, in common with other architects, had derived from Mr. Britton's works. Every lover of our ancient architectural glories, every man studying to acquire the power humbly to imitate them, was much indebted to him. By placing faithful representations of these buildings before the public, and rendering topographical literature agreeable as well as instructive, he had led them to appreciate these structures, and had mainly induced the present improved state of feeling on the subject. What should we know of many buildings now destroyed, if they had not been faithfully depicted and described, and how many more would have been destroyed but for the preservative spirit inculcated.

Out upon time, who for ever will leave,
But enough of the past for the future to grieve,
O'er that which hath been and that which must be:
What we have seen our sons shall see;
Remnants of things that have passed away,
Fragments of stone reared by creatures of clay!

How much then we owed to those who had ravished these noble works from the grasp of time, and induced a general desire to preserve them. He should have felt gratitude for this even as a stranger, but having had the gratification of a long connection with Mr. Britton, and having always found him a warm friend and a good man, there was still stronger reason why he should give all the aid in his power to the present endeavour to gratify him. This was but the beginning of the end,—which end was to present to Mr. Britton some permanent testimonial of respect and esteem, and until that was effected, they might still command his services.

DR. CONOLLY proposed "The Royal Institute of Architects," and connected with it the name of Mr. Tite. In the course of an eloquent speech, the doctor mentioned amongst other services for which thanks and praise were due to Mr. Britton, was the restoration of the church at Stratford-upon-Avon, the burial place of Shakspeare, mainly brought about by his remonstrances and advice.

As regarded the Institute, he was glad to learn that it had served to bring the members of the profession more closely together, and to induce kind feeling.

MR. TITE in replying to the toast (which he did very ably), acknowledged, on the part of the architects of the country, the lasting debt of obligation due from them to Mr. Britton, strongly contrasting the present state of general information on the subject of ecclesiastical architecture with its position before his works were published.

MR. GODWIN said he was deputed to propose a toast which could not fail to interest a meeting like that present, although from the lateness of the hour he feared to address them at any length. The toast was "the ancient fraternity of Free-Masons." The freemasons of to-day were known only in connection with good dinners and very great charity, but in former times, as they well knew, the freemasons occupied a different position. It seemed clear that the greater number of the magnificent works produced in the middle ages were erected by bands of men having in some degree a religious character, and protected by certain enactments, who were in fact the freemasons, progenitors of the present lodges. Without going into a long story, this fact accounted for several phenomena observable in tracing the history of architecture, and which might have interested them if there had been time for comment. There were at the table (continued the speaker) several of the largest builders of the day, Mr. Cubitt, Mr. Grissell, Mr. Herbert, Mr. Elger and many others, who each in themselves represented large bands of freemasons, — men who had built miles of sewers, covered new London with squares and terraces, and old England with interminable railways; and this made the toast more fitting still, especially as several of them were high in the mysteries. He did not know that they could still sing—

"High honour to masons the craft daily brings;
We're brothers of princes and fellows of kings:"

but he did know that they practised charity and the virtues, and if they did not teach Euclid, they still inculcated morality. In order that he might bear witness to this, in at least one case, he would couple with the toast the name of Mr. William Cubitt, not simply because he was a distinguished member of the craft, but because he was an old and warm friend of Mr. Britton.

MR. WILLIAM CUBITT made one of the best speeches of the evening in return, but the hour was then so late, that to take notes was out of the question.

"The Royal Academy" proposed by the chairman, called up MR. DAVID ROBERTS in reply, and MR. S. C. HALL appropriately terminated the proceedings with some excellent remarks full of feeling, on the value of a kindly demonstration in favour of one who still lived, as compared with posthumous honours.

THE ARCHITECTURE OF VENICE

ILLUSTRATED IN THE WORK OF CICOGNARA.*

WITHIN the memory of persons yet living, a republic which had passed through many centuries unchanged, though often menaced by foreign and internal commotion, has ceased to exist. Its city was the centre of much enterprise and traffic, and its children imprinted signs of their presence on the shores of distant lands. The Venetian masonry is found added to that of older date in every Grecian acropolis; and one of their castles is seen on the Red Sea in Arabia. The fugitives from the ravages of Attila in the fifth century, and from the invasion of the Lombards in the seventh, were the ancestors of those, who contested with Genoa more from mere motives of rivalry than the attainment of a definite object. The same "hundred isles," which are formed from only the slime of neighbouring rivers, were the seat of that people whose merchants were princes, and of the most brilliant school of painting, that the world has known.—

"The Rialto, where merchants most do congregate"

became the centre of a government, whose policy was the riddle and admiration of Europe, but was stained by the records of crime. From circumstances apparently adverse, the most important results are sometimes deducible, and in the midst of the islands in the *Lagune*—a surface of water from twenty to thirty miles across, but which, except where intersected by the deeper channels of the rivers, is seldom more than one or two feet in depth—arose a state, whose dominion extended over half the empire of ancient Rome, and whose palaces, though shewing a peculiar style of architecture, are hardly surpassed in that city. The fall of Venice at the close of the last century, before the arm of that revolution, whose influence penetrated into every part of the world, exploded the mystery of centuries, and revealed the internal policy and condition of the state. In the works of Sismondi and the Count Daru, Venetian history has been ably treated: and from the work now before us we gain an accurate conception of the several styles of architecture, and of the order of their influence. This elaborate work was undertaken by members of the academy of fine arts at Venice, under the presidency of Count Cicognara, and gives representations of all the buildings of any importance. The work is throughout of the most elaborate character, and, like many others appearing from the academies of Italy, suggests a slight contrast to the spiritless existence of similar bodies at home. Two thick folio volumes of plates, carefully engraved in outline, and interspersed with letterpress, are devoted to the subject. They consist of plans, elevations, and sections, but have not the advantage of perspective views, in which particular the book is inferior to the companion work on Genoa,* which we shall shortly take occasion to notice.

The earliest remaining architecture of Venice had that Byzantine character, which prevailed on the continent of Italy. The church in the island of Torcello has stilted arches, springing immediately from capitals of Byzantine taste. The cathedral of St. Marc, generally held to be the work of Greek artists, shews a still greater tendency to the Gothic style, in the crocketed and ogee canopies in its exterior and interior. It has the plan adopted in the Greek church, occupying a space of ground nearly square, at the end of the piazza of St. Marc, where the piazetta joins it at a right angle. At one end of the latter is the detached Campanile, immediately opposite the cathedral, and at the other end next the grand canal are the Red Columns, the elevating of which gained so great honour for a Venetian architect. Immediately contiguous to the cathedral, is the Ducal Palace, having one front in the piazetta, and the other looking on to the grand canal. "The Bridge of Sighs" joins the palace and the prison, an embodiment of that contrast between festive pomp and the unrelenting vengeance in the name of justice, which every page in the annals of Venetian history discloses. Nearly opposite the palace, at the entrance to the grand canal are the Dogana and the church of St. Maria della Salute. The cathedral of St. Marc is most remarkable for its numerous domes, but which are not of the best form and arrangement. They shew some knowledge of carpentry, being entirely of timber construction, elevated above the lower dome. The latter has the proportions and construction observable in Sta. Sophia, at Constantinople, and is, as well as the whole building, profusely decorated. The timber dome was entirely a feature of effect, far more space being lost in the cavity than in St. Paul's cathedral, where this has been deemed a fault, or in any other cathedral in existence. The front is highly enriched, but still is unsatisfactory, much of the ornament being disproportionate to the façade. The semicircular *pediment*, if we may so call it, which was so often used in later buildings over doorways, is often repeated. The winged lion of St. Marc is displayed, as on all the public buildings, and here are the celebrated bronze horses, at length "bridled."† Much of the internal decoration displays considerable beauty, particularly about the great altar, where there is the gothic character above alluded to. The Campanile is square in plan, plainer than some in other parts of Italy; it has a staircase in the thickness of the wall. The upper story, and pyramidal termination, were not parts of the original structure. In

* "Le Fabbriche più cospicue di Venezia misurate illustrate ed intagliate dai membri della Veneta Reale Accademia di belle arti.—Venezia, 1815-20." In two vols. folio.

* P. Gauthier les plus beaux edifices de la Ville de Genes, folio, Paris, 1824—30.

† "Before St. Mark still glow his steeds of brass,
Their gilded collars glittering in the sun;
But is not Doria's menace come to pass?
Are they not *bridled!*"
BYRON—Childe Harold, Canto 4.

the church of St. John and St. Paul, the nave has greater length, but the plan is still Greek. Subsequently, we find that the Gothic style, which prevailed in Italy during the 13th and 14th centuries, had considerable influence in Venice, but it must be confessed that the buildings in which it was used display little of that elegance observable in other parts of Europe, or even in other cities of Italy. The "Casa d'Oro" has gothic forms and arches, but has horizontal lines. The external elevations of the Ducal Palace were in the main gothic, but had many peculiarities assimilating them to the buildings of Lombardy. Much beautiful carving is observable about the capitals of the columns. The Porta della Carta, the gate of entrance to the Ducal Palace, belongs to the 15th century; it is still gothic, but has a square-headed door, apparently of the same date. The arch in front of the Giant's Stairs, in the same building, has some curious pinnacles. In the Palazzo Foscari, horizontal lines prevail along with gothic features; and in the Palazzo Pisani there is the same character, with the addition of quoins, and a rusticated basement. The influence of gothic taste did not last longer in Venice than in other parts of Italy, and before the close of the 15th century, Italian architecture was the only style in use. In the 16th century, the talents of some of the most celebrated architects were called into play during a temporary state of tranquillity, and Sammicheli, Palladio, Antonio da Ponte, and Scamozzi, left the most remarkable buildings of Venice; whilst in painting we find the names of Titian, Giorgione, Paolo Veronese, and Tintoretto. The Florentine Sansovino erected the mint, the library of St. Marc, and the *Procuratie Nuove*, and sculptured the statues of Mars and Neptune, emblems of the military and naval power of Venice, which still stand at the Giant's Stairs.

The style of this period, though corresponding with that of the most important buildings in Rome, Vicenza, and elsewhere, had some local peculiarities, even in the hands of architects, who had practised in other cities.

One of these was the extraordinary proportion, which windows and clear openings bore to the general front. Indeed, it might seem that much more light was sought than would be desirable, even where the front was towards some narrow canal or street, but the peculiar feature is equally observable in palaces upon the grand canal, where light would be attainable in abundance. It has been suggested, that this quantity of light was necessary to the effective arrangement of the numerous private festivals in this city of gaiety and wealth, but we cannot understand the force of the argument. We would venture the opinion, that the preponderance of voids over solids was a precaution suggested by the questionable nature of the foundation; or perhaps it may be suggested, that as locomotion had its difficulties and drawbacks, it was necessary to provide a good view of the scene without, from the apartments. The Palazzo Grimani was the work of Sammicheli, and displays the features alluded to. The arrangement of the cornice, in which height was given to the frieze, that member having windows and decorations, first practised by Peruzzi, was employed in the library at Venice by Sansovino. That beautiful building is of two orders in height, the columns being coupled transversely in the thickness of the wall, and the upper entablature proportioned to the whole building. In the intercolumns we find the Venetian window. The art of sculpture—at this period—contributed to the perfection of architecture, and to render the buildings of Venice especially remarkable amongst those of Italy. The extent of window-opening noticeable in palaces is not found in churches, which is an argument for the propriety of the view, last-mentioned above. Most of the churches were of a date, earlier than the palaces, and in their details are many singular points for notice. Sometimes the fascia was inclined in an exaggerated degree, and the patera of the Doric order was often mitred at the angle. The fronts had often no other opening but the door, and had frequently inscriptions and projecting panelling. The church of Santa Maria della Salute has the circular plan often employed at Venice, and a larger and smaller dome having a fine effect from all points of view. The thrust of the dome is resisted by a number of large scroll buttresses, upon each of which is a statue, giving the building a peculiar but pleasing effect. In the gate of the arsenal, the singular use of an angular modillion is found.

We cannot do better than advise all, who are interested in the history of Italian architecture not to confine their attention to the graphic part of this fine work. The future state of Venice promises to be more prosperous than her late history, and the junction of the city to the mainland, by the viaduct of a railway, will probably effect a great change in her condition. Let us hope, however, that such change will not obliterate the records of the past, records which have prompted the poetry of Byron, and afforded materials for the dramas of Shakspeare. E. H.

CUTTING INTO CHIMNEYS.

AWARD UNDER BUILDINGS ACT, AND MODIFICATION OF A CLAUSE.

The following clause in schedule F. has occasioned some embarrassment.

"*Cuttings into Chimneys.*—And as to every chimney-shaft, jamb, breast, or flue already built, or which shall be hereafter built, in reference to cutting the same, no such erection shall be cut into for any other purpose than the repair thereof, or for the formation of soot-doors, or for letting in, removing, or altering stove-pipes or smoke-jacks, except as directed for building an external wall against an old sound party-wall."

This has been held to prevent an owner from enlarging his room by the *removal* of a chimney-breast against an internal wall even, unless he also took down the breast above, although the latter could have been securely supported without difficulty. The referees, by the following award, recognize the hardship of the enactment, and shew the considerate view which they propose to take of it.

We give first the surveyor's application to the referees on the subject, and his notice to the builder.

District of Saint John, Saint Thomas, and Saint Olave, Southwark, and Saint Mary Magdalen, Bermondsey.

12, Bermondsey-square, April 24th, 1845.

Sir,—I hereby request the determination of the official referees as to the following matters, concerning which, difference has arisen between the builder of the under-mentioned works and myself.

Mr. Henry Horlock, of 11, Augusta-row, Spa-road, builder, has cut into, and cut away certain chimney-jambs, breasts, and flues, for other purposes than those allowed by the above Act.

Previously to the commencement of the works hereafter mentioned, a certain stack of chimneys existed back to back in an internal wall of a certain house, situate and being No. 3, Grange-road, in the occupation of Mr. Teversham, and was built from the foundations which are below the surface of the basement floor upwards.

The whole or greater part of so much of the said stack as extended through the ground story has been cut away, and the upper part of the stack is now supported upon a brest-summer and two iron columns based upon the part of the stack still remaining in the basement story.

The notice of irregularities, of which a copy is hereto appended, was duly served on the builder, and the first-mentioned irregularity has not hitherto been amended.

I have the honour to be, Sir, &c.,
(Signed) Robert Hesketh.

"To the registrar of Metropolitan Buildings.

(*Copy.*)

To Mr. Henry Horlock, of 11, Augusta-row, Spa-road, builder, or to the foreman or principal workman on the premises hereunder mentioned.

I do hereby give you notice, that the building operations now in progress under your superintendence, situate at Mr. Teversham's house, Star-corner, in the parish of St. Mary Magdalen, Bermondsey, are not conformable to the statute in the portions thereof under mentioned; and I require you within forty-eight hours from the date hereof, to amend the same.—April 16th, 1845.

IRREGULARITIES REFERRED TO.

Certain chimney-breasts, jambs, and flues, having been cut into for other purposes than those allowed by the said Act; and certain timber being placed under the chimney openings, so that the same is, or will be within 18 inches of the surface of the hearth.

Robert Hesketh, District Surveyor.
12, Bermondsey-square."

The following is the award:—

With regard to the house in the occupation of Mr. Teversham, situate and being No. 3, Grange-road, in the district of St. John, St. Thomas and St. Olave, Southwark, and St. Mary-Magdalen, Bermondsey, within the limits of the Metropolitan Buildings Act, 7 and 8 Vict. cap. 84.

Whereas the official referees of metropolitan buildings, duly appointed in pursuance of the said Act, have received and duly considered the information of Robert Hesketh, the surveyor of the said district, against Henry Horlock, relative to certain works done by him at the said house, dated the 24th day of April, 1845, containing a copy of the notice of irregularity, from the said Robert Hesketh to the said Henry Horlock, a copy whereof is hereto annexed.

And whereas on the 13th day of May inst. the said official referees did duly hear the said Robert Hesketh and Henry Horlock touching the matters of the said information, and did also proceed to view the said premises.

Now, inasmuch as the works in question *have been securely done and are not dangerous as regards fire*, and are entirely within the same premises, we the said official referees make no award thereon.

And with regard to the costs and expenses attending this proceeding, we do hereby award that the same be paid by the said Henry Horlock, that is to say,

First, as to the fees and expenses of the office of metropolitan buildings, that on or before the 3rd day of June, 1845, the sum of 2*l.* 5*s.* 6*d.* be paid to the registrar of metropolitan buildings at the said office at No. 3, Trafalgar-square, London.

Secondly, as to the costs and expenses of the said Robert Hesketh, as such surveyor as aforesaid, that on or before the said 3rd day of June, 1845, the sum of 1*l.* 1*s.* be paid to the said Robert Hesketh, at his office, No. 12, Bermondsey-square, or to the said registrar at the office aforesaid.

In witness whereof, we, the said official referees, have to this our award on two pages of foolscap paper, set our hands this 26th day of May, 1845. (Signed)

Jas. W. Higgins. } Off. Ref.
William Hosking. }

Arnott's Ventilating Valve.

The clause above referred to prevented the insertion even of the ventilating valve, and the referees accordingly obtained a modification of it, as is set forth in the following document:—

"To all to whom these presents shall come, greeting. Whereas by an Act of Parliament passed in the 7th and 8th year of the reign of her Majesty, entitled "An Act for regulating the construction and the use of buildings in the metropolis and its neighbourhoood," after reciting that for the purpose of preventing the express provisions of the said Act from hindering the adoption of improvements, and of providing for the adoption of expedients either better or equally well adapted to accomplish the purposes thereof, it was enacted with regard to every building of whatever class, so far as related to the modification of any rules thereby prescribed, that if in the opinion of the official referees the rules by the Act now in recital imposed should be inapplicable or would defeat the objects of such Act, and that by the adoption of any modification of such rules such objects would be attained either better or as effectually, it should be the duty of such official referees to report their opinion thereon, stating the grounds of such their opinion to the commissioners of works and buildings; and that if on the investigation thereof it should appear to the said commissioners that such opinion was well-founded, then it should be lawful for the said commissioners, or any two of them, to direct that such modification might be made in such rules as would in their opinion give effect to the pur-

poses of the said Act. And whereas the official referees have, by their report, in writing, bearing date the 7th day of March last past, certified to us that the invention denominated Dr. Arnott's ventilating valve is an improvement tending to increase the ventilation, and thereby produce a healthier atmosphere in apartments. And that it may be made so as not to counteract the enactments for security from fire. And that there is no provision in the said Act prohibiting its being built into new chimneys, and therefore cuttings for its insertion into chimneys already built may be permitted. And that the present rules in the said Act are inapplicable, and such as would hinder the adoption of the improvement denominated Dr. Arnott's ventilating valve. And that by a modification of such rules in schedule F. of the said Act such objects will be better attained. And having, on investigation of these grounds, and of the subject matter set forth by the official referees, considered them, and the opinion of the official referees to be well-founded, we, the undersigned, the said commissioners of her Majesty's works and buildings, do hereby direct that a modification be made in the rules of the said Act, after the last existing clause in schedule F., as follows, viz.:—

"And except for the insertion of Dr. Arnott's ventilating valve, provided that such cutting be not nearer than 9 inches to any timber or other combustible substance, and that the valve be so arranged as not to be capable of opening more than 30 degrees from its vertical position. And that every part of the valve be made and fixed with incombustible materials."

Which modification being made in such rules will, in our opinion, give effect to the purposes of the said recited Act.

As witness our hands this 17th day of June, 1845. (Signed)

LINCOLN, } Commissioners of
CHARLES GORE, } Works and Buildings.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT an ordinary meeting held on the 23rd ult., Mr. Tite, V.P., in the chair, several presents were received, and Mr. J. Dobson, of Newcastle-on-Tyne, was elected a fellow. A paper was read by C. Parker "On the Proportions of the Beams used by Ancient and Modern Architects." The paper commenced by shewing the strongest beam that could be cut out of a round tree, and contrasting the proportions with the usual forms which ancient and modern architects adopted in beams, the former making the breadth, and the latter the depth, the element of strength. It then traced the views that different nations have held and practised in their constructive operations. It stated that the Egyptians preferred the square form of bearing beam, which proportion was used in Solomon's palace, and that the Greeks and Romans used the rectangle placed horizontally. It then remarked that in the timber buildings erected before and after the Norman conquest, the breadth of a beam was placed to resist an opposing force, and so continued to be used in the rebuilding of London after the fire in 1666. Prior to this date, the system of double framing was introduced on the continent, and changing the proportion of timbers made the depth preferred to the breadth, which view is now thought correct. The diversity of opinions thus shewn, induced the writer to institute a number of experiments, which were made with iron, from the difficulty of obtaining specimens in wood of equal strength.

The results of these were given; one curious deduction was, that two bars of equal size will not bear double the weight that one of them will support. The same bars formed into the reversed T shape (⊥), would support twice the weight that they would carry placed side by side. Making a beam two, three, or four times the width does not make it proportionably stronger. In a conversation on the subject that afterwards occurred, Mr. Tite referred to the tables in Tredgold, and cautioned young architects against unlimited dependence on them; he believed the scantlings there given, to be too slight. The scantlings, for example, given for a queen-post roof of fifty feet span were insufficient. He had made a roof in younger days with scantlings in accordance with Tredgold's instructions, and it had failed. Much was often said of the smallness of timbers used now as compared with those in old buildings; for his part he believed our houses (that was, our properly built houses) were better timbered now than then. He regretted that Mr. Parker had not tried his experiments with timber, instead of iron, as the materials were not analogous. Mr. Godwin directed attention to the report recently made by Mr. Cubitt and Sir H. Delabeche as containing valuable information on the subject of iron beams. Mr. I'anson said the great point was to discover the neutral axis in beams.

A paper drawn up by Mr. G. Bailey, was afterwards read, descriptive of a series of drawings of buildings in Southern India, made some time since under the direction of General Monteith. The drawings comprised some elaborate views of the pagodas, and the palace and choultry of Tremail-Raig at Madura, a city on the Coromandel coast, and erected about the year 1623; likewise of the Great Temple of Shivven, on the sacred island of Ramisseram, between the Coromandel coast and the island of Ceylon, and but little known to Europeans. This temple and its appurtenances almost entirely cover an area of 830 feet by 625 feet. The building is of different periods, a small shrine or temple having existed on the island from a remote period, but the chief additions were made by the Rajah of Ramnad, about 150 years since.

Mr. Moon offered some remarks on his improved chimneys. He stated that in consequence of the new Metropolitan Buildings Act, and in order to comply with its regulations, he had been compelled to new model the bricks, in doing which he had been enabled to simplify the construction. He observed that different opinions existed as to the space required for the emission of smoke, and that various sizes and diameters had been adopted. In his original formation he adopted three sizes, but experience and attention had brought him to the conclusion that one size was sufficient for ordinary purposes, viz., 10 inches diameter; which, bonded and worked in a wall two bricks thick, and complied with the stipulations of the Building Act, by leaving 4 inches of solid brick at the thinnest point.

July 7th.—Mr. Pocock in the chair. A paper was read by Mr. Edward I'anson, jun., on a mosaic pavement in the cathedral of Sienna. Mr. Scoles afterwards made some remarks on columns.

THE CONSTRUCTION AND WORKING OF RAILWAYS.

SIR,—As you were kind enough to insert my former communication on railways, I beg leave to trouble you with a few more observations on the same subject. I observe that a commission is to be appointed by her Majesty, to inquire into the inconvenience attending the break of gauge, and the practicability of having a uniform gauge established throughout the country; and as the commission is to be composed of men of science unconnected with the Houses of Parliament, and, I hope, *uninterested* in any line of railway, I anticipate much good will result to the country from their labours. There cannot, I am sure, be two opinions on the subject of the inconvenience attending the difference of gauges of railways, and even Mr. Brunel's proposition to obviate the same, namely removing the train of carriages from the broad to the narrow gauge, and *vice versâ*, is but a clumsy and objectionable substitute to cover an acknowledged deficiency; for if we are to reap the full benefit of railway locomotion, we should not be subject to any such delays or obstructions as would be required to transport a whole train of carriages from one line to the other at every point of junction of railways of different gauge.

In Ireland one uniform gauge might have been adopted, and even a different principle, if considered necessary, but I observe they are pursuing the same short-sighted policy as we are in England.

The evil consequences attending the difference of gauge was foretold by Mr. Hawkshaw, civil engineer, in his report to the Great Western Company in 1838, immediately after the Great Western Railway was commenced; he observed: "It will not be too much perhaps to say that three-fourths of England are already being traversed by railways of the narrow gauge. It follows then that any company deviating from this gauge will be isolating themselves to a certain extent, if not as regards their main line, yet as regards their branches; if not as regards their direct traffic, yet certainly as regards their collateral traffic. But in the present early stage of railway traffic it yet remains to be seen whether or not it may become a great evil for a main line to be thus isolated and rendered impossible of connection with the great lines in its neighbourhood. That it will be an evil in this sense as it regards the branch lines there can be little doubt, for they, or some of them, in course of time will of necessity run into the neighbourhood of other lines of different gauge; but with these, however vital the connection may be, all connection will be impossible.

In this point of view only it has become a serious matter for any company in this country to make their line differ as to dimensions from the majority of the lines around them. It is to a certain extent as if a canal company in a country of canals should construct a new navigation so, and with locks of such a character as would totally shut out the boats of all the canals that surrounded it."

Although it has been remarked by a member of a committee of the House of Commons that no engineer would commit himself to state what he considered to be the best gauge for railways, yet when we reflect that all the leading engineers of the day, with one or two exceptions, are projecting railways on the narrow gauge principle, it is pretty conclusive evidence which system they prefer. I always judge of engineers by their works. I regret that the powers of the commission are to be limited to the subject of the gauge, and not extended to the construction and working of railways, as these appear to me to require scientific analysis and investigation as well as the gauge. There is now and will be as much squabbling between engineers about this construction of railways as there was formerly between the disciples of Telford and MacAdam respecting the correct principles of construction of turnpike roads; and unless this subject, as well as the more important one of the moving power, be submitted to the mature deliberation of a scientific commission of inquiry, a further sacrifice of the "sinews" of the country must be made to the great benefit of engineers and gentlemen of the legal profession. The great cost attending the progress of private bills through Parliament has frequently proved a source of serious and permanent injury to the works.

As the extent of railway on the narrow gauge principle exceeds nearly fourfold that of the broad, and as it would be attended with a considerable expense to increase the width of the narrow gauge railways, inasmuch as the cuttings and embankments would require widening, the bridges and tunnels enlarging, and the upper works reconstructing and strengthening, and as it is not too late even now to obviate the evil of the difference of gauges, I would recommend the broad gauge to be reduced, which may be done at a comparatively trifling cost merely by laying down an additional line of rails to suit the narrow gauge traffic, and that the respective companies of the broad gauge railways could introduce gradually locomotive engine carriages, &c., on the narrow gauge principles as their old stock became depreciated or unfit for service. As this alteration would be required for the public convenience, I think in justice the expenses incurred ought to come out of the public treasury. B. B.

Brecon, June 30th.

*** In the committee, on Wednesday, the 25th ult., Mr. Cobden moved the following resolution, which was afterwards agreed to:—"That, it having been represented to this House by petitions from various public bodies, as well as from merchants, manufacturers, and others, that serious impediments to the internal traffic of the country are likely to arise from the 'breaks' that will occur in railway communications from the want of a uniform gauge; and these representations not having been fully inquired into by any of the committees of this House upon private bills, and it being desirable that the subject should be further investigated, an humble address be presented to her Majesty, praying her Majesty to be graciously pleased to issue a commission to inquire, whether in future private Acts for the

construction of railways, provision ought to be made for securing a uniform gauge, and whether it would be expedient and practicable to take measures to bring the railways already constructed, or in progress of construction, in Great Britain, into uniformity of gauge; and to inquire whether any other mode of obviating or mitigating the apprehended evil could be adopted; and to report the same to this House."

Her Majesty has since appointed Sir John Mark Frederic Smith, Lieutenant-Colonel of the Royal Corps of Engineers, late Inspector-General of Railways; George Biddle Airy, Esq., Astronomical Observator in her Majesty's Observatory at Greenwich; and Peter Barlow, Esq., Professor of Mathematics in the Royal Military Academy at Woolwich, to be her Majesty's Commissioners for the purpose stated.

INSTITUTION OF CIVIL ENGINEERS.

On Tuesday, June 24th, Sir John Rennie, president, in the chair, a paper was read by Mr. J G. Bodmer, "On the advantages of working engines with high-pressure steam expansively and at great velocities."

The author based his observations upon the principle of a considerable area of piston being essential for taking advantage of the initiative impulse of highly elastic steam, in contradistinction to the idea of the percussive action which had some time ago found advocates. In order therefore to take advantage of this action, and be enabled to cut off the steam at an early period of the stroke, the piston at short intervals, and consequently making a great number of strokes within a given time, must travel over a limited distance, that as little as possible of the heat, and consequently of the elasticity, should be lost.

It has been generally acknowledged that the action of a short crank and rapid stroke is very disadvantageous to the framing and foundations of ordinary engines. Mr. Bodmer has in constructing his compensating engines concentrated the action, and confined the strain to the crank, connecting rod, and piston rod. By this construction he has been enabled to carry the expansive principle to such an extent, as to deliver the steam into the condenser almost in a state of mere vapour, or within 3lbs. of a vacuum. The saving of fuel must therefore be in proportion; and there must be a very considerable reduction of the actual weight of the machinery, and of the coals on board steam vessels on long voyages. The paper considered at great length the reasonings upon these principles, and in tabular forms gave the comparative results of this and the ordinary engines. The peculiar construction of the compensating engines was illustrated by several models and detailed drawings, shewing the peculiar action of the expansion valves, and the two pistons in each cylinder. The great difficulty encountered appeared to have been in the valves of the air-pumps, which were destroyed by the extreme rapidity of the action; this was provided for by constructing an air-pump without valves. By a peculiar arrangement of the air and water passages it became practicable to substitute for the ordinary cover a piston travelling through a very limited space, and for the air-pump bucket a solid piston travelling the full length of stroke. The valves were thus done away with, and the action of the engine became complete. This construction has been adopted with great success in several stationary and locomotive engines, and is now being applied to marine engines, to which it is peculiarly applicable, as it is of great importance to be enabled to work the Archimedian or screw propeller without the intervention of bands or wheel work.

Mr. J. Woods exhibited and explained the action of Siemens' chronometric governor. The centrifugal governor of Watt being acknowledged to be an imperfect instrument in consequence of its inability to adjust the valve to the altered circumstances of the load of the engine, Mr. Siemens invented the chronometric governor. The new instrument was stated to have been at work successfully for some time at Carpenter's Corn Mills, Shad Thames. It consists chiefly of a heavy pendulum which is allowed to move to a certain arc of vibration of chronometric revolutions, and it is connected with the horizontal pinion above, which therefore moves in union with it: an endless screw is geared in contact with the horizontal pinion, and is drawn by a constant weight in a horizontal direction: it has therefore a tendency to produce revolution of the pinion and pendulum. This horizontal screw must be turned by the engine at the exact velocity necessary to insure its running in gear with the pinion, driven at the constant velocity dependent on the length of pendulum; and should the engine succeed in turning the screw at the proper velocity no horizontal movement will take place, and the weight on the lever, before mentioned, continues a constant driving power independent of the engine, for overcoming the existence of the atmosphere and the friction of the pendulum. If the load, or the supply of power varies, a tendency to alter the speed of the horizontal shaft immediately commences, and it takes up a new position, by having travelled faster or slower than the pendulum and its pinion, and it retains this altered position, and consequently the adjustment of the valve, by means of appropriate connecting levers, until the conditions of equilibrium of load and power are again varied.

The action of this governor is so sensitive, that no variation of the speed of an engine, when 40 per cent. of its load is thrown off, can be observed, for the entire change is performed in one fiftieth of the revolution of the fly-wheel; this change absorbs or adds a portion of the momentum of the pendulum, and slightly alters its arc of vibration, the limit of which is between 18° and 21°, and by the laws of pendulous motion this is shewn to effect the number of revolutions to the amount of only 8 per cent. of its velocity, and even that small variation in the extreme position of the pendulum ceases immediately the momentum is restored to its former condition.

This being the last meeting of the present session, the president addressed the members, with congratulations on the interesting character of the papers read the discussions at the meetings and the very full attendance of members and visitors; and impressed upon them the necessity of redoubled exertions in future in order to support adequately the elevated position which the Institution had attained. Mr. Walker, in a speech full of kind feeling, proposed a vote of thanks to Sir John Rennie for his devotion to the duties of president, his uniform attendance at the meetings, and the kindness and hospitality he invariably displayed to the members collectively and individually. The meeting then adjourned until the second Tuesday in January of the ensuing year.

In closing our notice of the proceedings during the session, we cannot omit a brief commendation of the energy and ability with which the present secretary, Mr. Manby, discharges the duties of his office, and materially conduces to the effectiveness of the association.

PRIZES IN ARCHITECTURE.

UNIVERSITY COLLEGE, LONDON.

The following is a list of the students who were rewarded after the recent examination:—

FIRST YEAR'S COURSE.

Fine Art.—Prize ..	Mr. G. Lamb.	
2nd Certificate..	Mr. Fred. Chancellor	equal.
2nd ,, ..	Mr. John Seddon	equal.
3rd ,, ..	Mr. W. W. Deane.	
Science.—Prize....	Mr. Frederick Chancellor.	
2nd Certificate..	Mr. George Lamb.	
3rd ,, ..	Mr. W. W. Deane.	

SECOND YEAR'S COURSE.

Fine Art.—Prize ..	Mr. E. P. Boyce.
2nd Certificate..	Mr. Charles Corbett.
3rd ,, ..	Mr. Howard Bankart.
Science.—Prize....	Mr. C. Corbett.
2nd Certificate..	Mr. T. O. Donaldson.
3rd ,, ..	Mr. Howard Bankart.
4th ,, ..	Mr. Edwin Ireland.

The Academy of Fine Arts, Philadelphia.—On the night of the 11th of June, this establishment was consumed by fire, an event that is ascribed to the act of an incendiary. Among the very few works saved are Gilbert Stuart's full-length portrait of Washington, West's "Death on the Pale Horse," Haydon's "Christ's Entry into Jerusalem," and Alston's "Dead Man Restored to Life."

LEVERINGTON CHURCH.

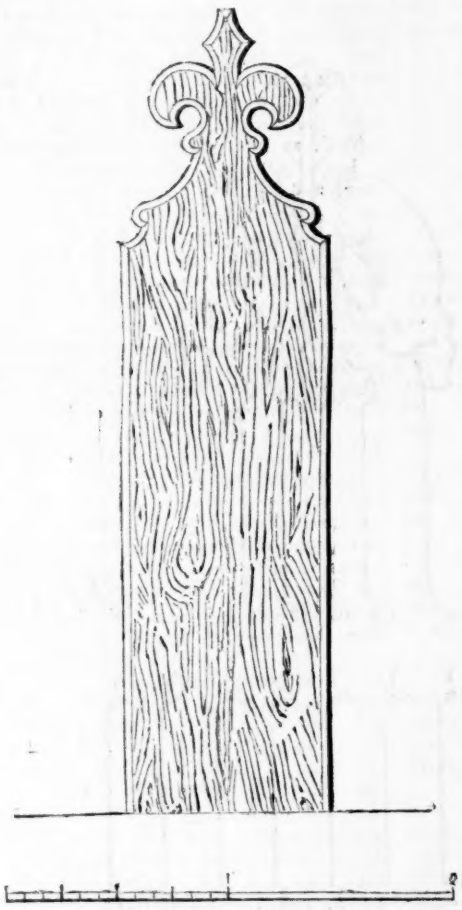
For some months past the church of Leverington, near Wisbech, has been undergoing repairs, which the fearful state of dilapidation into which it had fallen rendered necessary. These are now completed. The restorations, though they have not been so complete as they might have been, are yet very extensive, and have converted almost a ruin into a very interesting structure. We have not heard the exact cost which has been incurred, but believe the burden upon the parish is under 1,000*l*., as the rector himself contributed 500*l*.

Leverington is a good specimen of architecture, and contains valuable examples of the early English, decorated, and perpendicular styles, the tower is early English; the spire above it rising altogether to the height of 162 feet, is decorated and pierced with small lights. The base of the spire is flanked by four octagonal turrets, which somewhat awkwardly serve the purpose of the pinnacle and flying buttress in Louth and other celebrated spires. The body of the church is built in the perpendicular style, and is upwards of 200 feet long; presenting a very open and light appearance. Before the late alterations, abuse upon abuse had been inflicted on the church. One part had been built off to form a coal-hole, at the expense of two beautiful perpendicular windows, one of which of elaborate design now forms a conspicuous feature in the west end. On the opposite side another large piece had been built off to form a vestry; and between these unsightly incumbrances a very mean gallery had been erected, immediately in front of a rich early English arch, with foliated capitals, supporting the east wall of the tower. All these blemishes have been removed, and, by the exertions of the Rev. H. Jackson, the curate, the windows have been restored, and the floor of the tower thrown open to the nave. The south side of the church has been almost entirely rebuilt; and two heavy brick buttresses, that seemed actually dragging the walls they were erected to support, have been taken down, and the architecture finished in its original taste. A new roof, braced by simple open work, has also been put up, and the whole church re-pewed, or rather re-seated. This last alteration will be as much appreciated by the inhabitants as any that has been made. No church had suffered more from the abuse of pewing, that grand abuse of English churches, than Leverington. Pews of the size of parlours encumbered its aisles, and even intruded into the middle width of the nave. Mr. Jackson has, however, fought and conquered the prejudices that were raised against seating the church, and the advantages will, we are sure, be appreciated even by those most hostile to it in the first instance.

Leverington has several claims upon the antiquary. The font, which has been engraved in Van Voorst's work, is one of the finest perpendicular fonts in England. It is octangular, and 8 niches with figures form its sides. The pillar is similarly ornamented, with eight emblems at its foot. Leverington has besides, the rather uncommon ecclesiastical curiosity of two credence-tables, attached to two portions of the aisles, which were formerly chapels. They are perpendicular, like most other parts of the edifice, and are in excellent preservation. The piscina of each chapel is also preserved. The south porch is one of the most remarkable parts of the building, and is, at the same time, one of the most chaste and simple of its beauties. Its buttresses are niched, its pediment crocketed, and a very rich open parapet runs along the ridge of its stone roof. Over it is a parvise chamber whose sloping stone roof is broken into the pointed arch by the latter springing from nearly the centre of the slope, the space between the point of the arch and the meeting of the roof being filled with a ring of stone. This roof is perhaps singular in ecclesiastical architecture. There is also a piscina in this chamber.

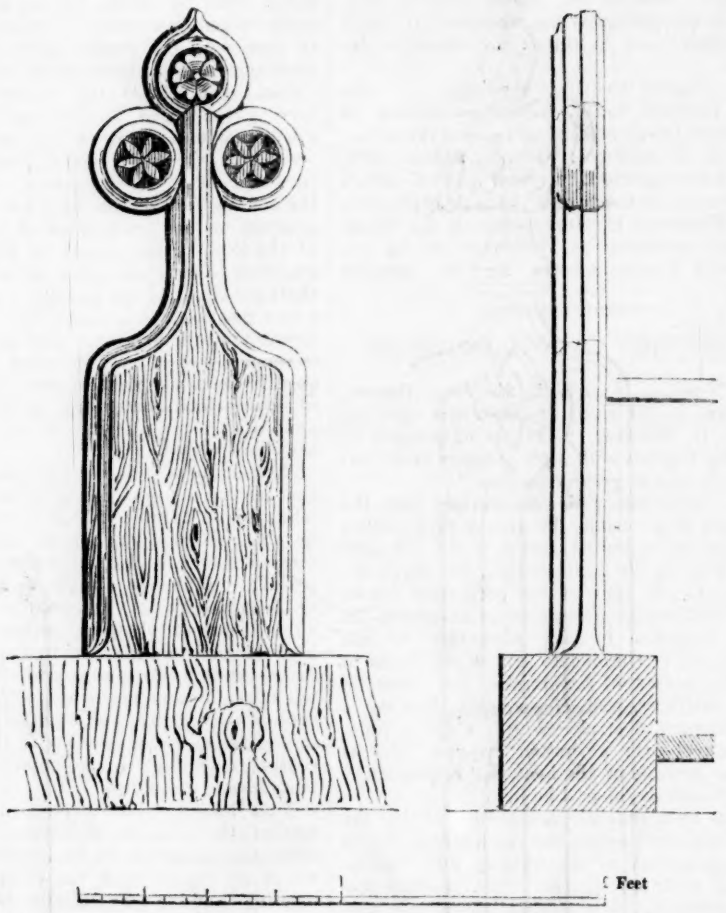
There was formerly one entire window of rich painted glass in this church, but it has been suffered to be strangely mutilated, and is now only a wretched fragment. Several portions of painted glass are also inserted in the other windows of the chancel, which, together with the parts we have mentioned, and some costly monuments, make Leverington well worth a visit from all interested in our old ecclesiastical remains.—(*From a Correspondent.*)

EXAMPLES OF CARVED BENCH ENDS.



2 Feet

Fig. 1.



1 Feet

Fig. 2.

CARVED BENCH ENDS.

ALL SAINTS CHURCH, BRANSTON, RUTLAND.

This church contains several bench ends, as shewn by the engraving, fig. 1. There is not any thing else worth remarking in this church, except the old Norman font, which having been discarded from the interior, now serves for a tank to catch the water which falls from the nave roof.

DICKLEBURGH CHURCH, NORFOLK,

Is on the road to Norwich, 4½ miles from Diss; it is a very interesting church, dedicated to "All Saints," and consists of chancel, nave, aisles, and chapels, and western tower.

The accompanying engraving, fig. 2, shews the character of the bench ends, which are remarkably small, being only 2 feet 5 inches in height, and 10 inches broad. There is a very beautiful octagonal font in this church.

NEWARK CHURCH, NOTTS.

The accompanyin gengraving, fig. 3, represents one of the seven different designs of bench ends in the Church of St. Mary Magdalen, at Newark, so well known for its elegant tower and spire. This church was founded by Allan Flemyng, in the reign of Henry VI., to whose memory is the splended brass now on the wall at the back of the altar, but formerly in the south transept. It has shared the fate of most of our churches, in the way of huge galleries; some good stained glass still remains, and there is an excellent picture by Hilton, who was a native of Newark.

ST. GILES'S CHURCH, AT BALDERTON, NOTTINGHAMSHIRE,

Is entirely filled with open benches. The ends, one of which is represented by the engraving fig. 4, vary only in the animals and heads, the general outline being preserved throughout. They have a very beautiful effect. There is also a very fine Norman porch on the north side of this church.

Burwood-place. GEORGE TRUEFITT.

ART AND MANUFACTURES.

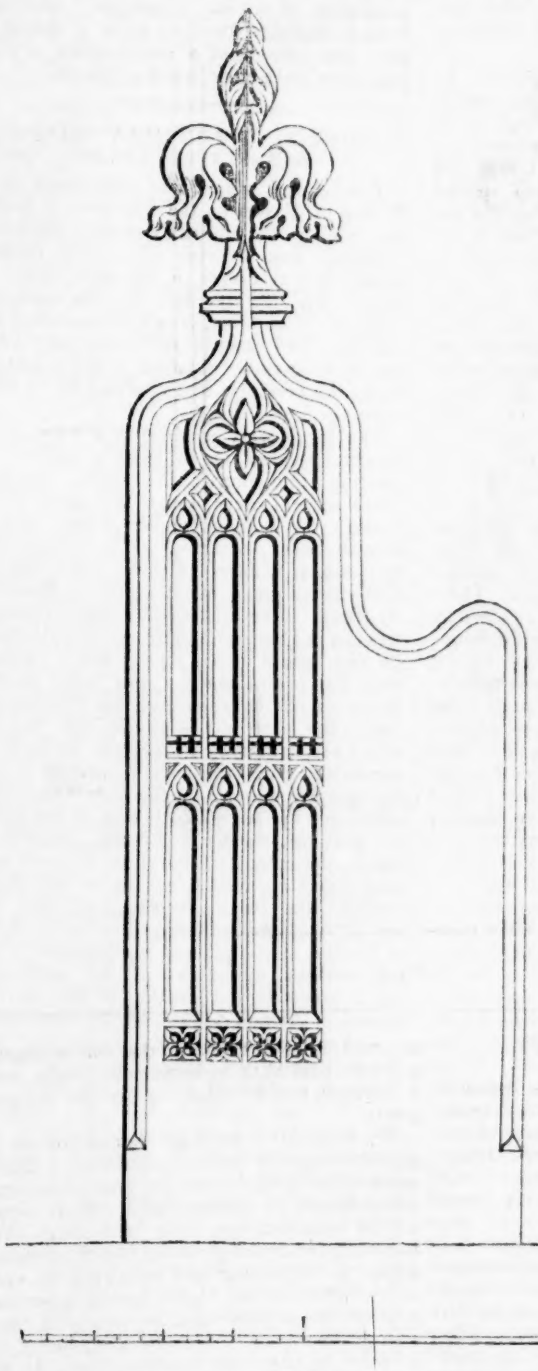
THE Art-Union Journal of the present month contains, in addition to its usual varied and valuable matter, a detailed account of the articles lately exhibited at the Free Trade Bazaar, viewing it as an exposition of the products of British industry,—as a first attempt to bring the various manufacturers of the country together, that they may compare the progress that has been made in the application of art to their several materials,—and as shewing the importance of design in enhancing the mercantile value of our manufactures. The account is ably written and profusely illustrated by wood cuts, and cannot fail materially to influence the healthy movement now being made by our manufacturers. At the conclusion the writer urges, as we have already done, the importance of establishing forthwith a periodical NATIONAL EXPOSITION:—"Commercially viewed, such an enterprise would more than repay the cost and time of its preparation. We have heard large contributors to the Bazaar assert, that the advertising effect of having their goods displayed in Covent-garden, under all the disadvantages of sale and crowding, very nearly compensated the cost of the goods. It was asserted in the French Chamber of Deputies, that the sales of goods to the foreigners who crowded to Paris to see the Exposition last year, more than doubled the whole expense of the building and attendants.

A National Exposition in London would attract visitors from every quarter of the globe; and the rent which manufacturers would gladly pay for the use of the space necessary to the display of their goods would more than cover the cost, even if admissions were gratuitous. Such a project is worthy the combined efforts of the Board of Trade and the School of Design. They would be nobly supported by the country, and the Temple-Palace of British Industry would surpass any thing which this world has ever witnessed. A hint of this kind was given at the Bazaar, and was received with an enthusiasm which left no doubt of the result, and just as little doubt that the enterprise will be undertaken by some public body, even if it should not be taken up by the Government.

We look upon such an Exposition as an important part of national education. Specimens of beautiful conception and artistic execution cannot be contemplated without elevating the mind and improving the feelings. The Bazaar gave evidence of the benefit of such a display in improving and enlarging the sympathies. No one could avoid feeling a personal interest in the continued prosperity of those who produced such triumphs of ingenuity and industry, of taste and of intelligence. It was scarcely possible to avoid reflecting on the consequences that would follow, if the looms which wove those shawls, carpets, and dresses were stopped; if the furnaces that produced those magnificent castings of iron were blown out; if the hammers that wrought this steel ceased to sound; or if the spindles that spun this yarn ceased to turn. How many families would at once be consigned to misery! how many happy cottages would be reduced to the deplorable condition of the rick-burner's home! We sadly want to be introduced to each other in this country, and to learn more of our mutual dealings and productions. The worker at the loom has much to learn from the worker with the hammer; the weaver of lace and the weaver of horsehair might communicate with profit; and the designer for iron might interchange valuable hints with the designer for porcelain.

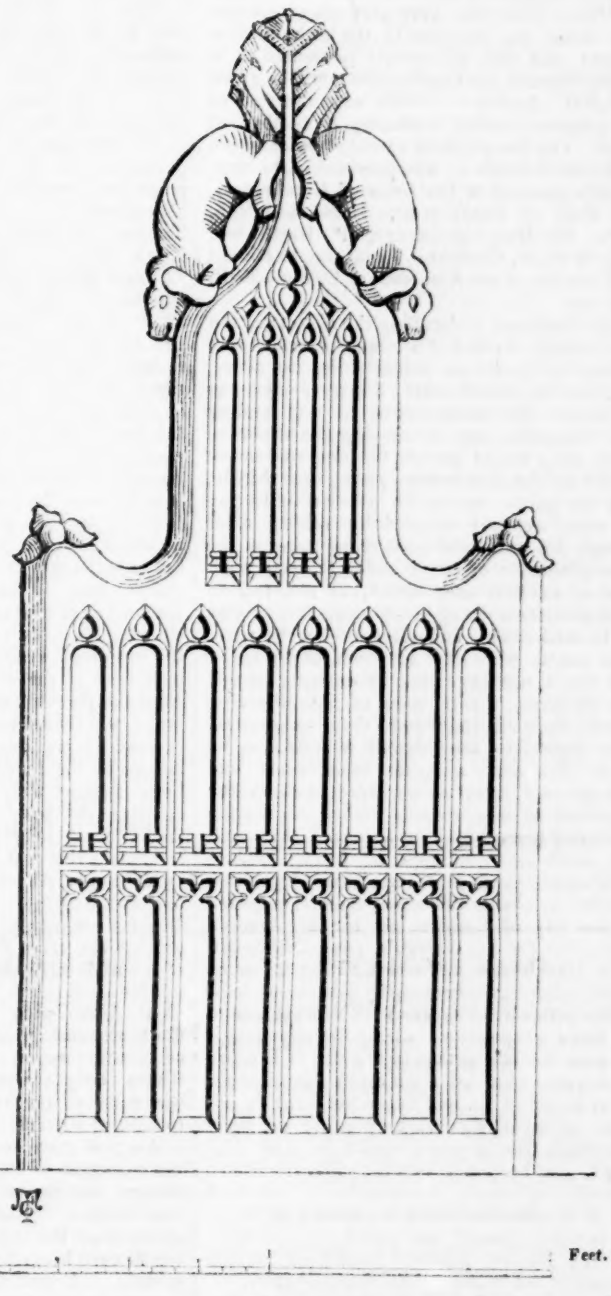
A more perfect National Exposition of the products of British Industry would lead to the display of high and noble feelings with greater intensity and wider extent. It is for this reason chiefly that we so strenuously urge the project. We value taste, we esteem industry, we love every form in which intelligence embodies ideality; but, above all, we estimate the influence of artistic beauty in developing emotions of moral loveliness, and the influence of the triumphs of Britain's industrial prowess in strengthening every man's interest in the prosperity of the British nation.

EXAMPLES OF CARVED BENCH ENDS.



2 Feet.

Fig. 3.



Feet.

Fig. 4.

The long night of darkness, in which Nations fought for vain shadows and derived their dreams of glory from violence and bloodshed, has gone down the sky. "The dayspring from on high has visited us," and taught that "Glory to God in the Highest" is blended and identified with "Peace on earth, good will towards men!" Commerce must bind together the nations which were dissociated, and trade unite the races which blind and selfish jealousy dissevered. The soothing influences of Art, superadded to the usefulness of manufactured products, will give force and efficacy to those lessons of civilization which it is the proud destiny of Britain to preach to the whole human race. In this career we see no goal fixed to our country's march of prosperity and greatness: her benefits to humanity will be co-extensive with the wants of mankind; and her high reward will be a recognized supremacy in intelligence more glorious than the sway of the proudest empire that ever existed.

MONUMENT TO THE LATE SIR WILLIAM FOLLETT.—We understand (says the *Exeter Gazette*) that it is in contemplation to erect a statue to the memory of our late respected representative, as the most fitting memento of the admiration of his genius and character entertained by the citizens of Exeter.

IMPORTANT TO ARTISTS.

THE Art-Union of London are about to offer a premium of 500*l.* for a group in marble, to be competed for by models in clay, the size of the intended work. These must be sent in by the 1st of July, 1846, and the work finished in marble by the 1st of July, 1847; 200*l.* will be paid when the premium is adjudged and the remainder on completion.

As regards the historical picture for which a premium of 500*l.* has been offered, the committee request artists to forward by the 1st of December next (that is, a month before sending the cartoon), a sealed letter containing name and address, and having on the outside a motto by which the cartoon must also be distinguished. The object of this arrangement is, that the committee may learn how many cartoons will probably be forwarded, so that they may provide sufficient accommodation for the exhibition of them.

On Monday, the 15th of December, artists may learn by application at the office, the name of the place to which the cartoons are to be sent; 200*l.* will be paid on the selection being made.

We observe with regret that in consequence of the approach to the end of the session the bill brought in by Mr. Wyse some weeks ago to place art-unions on a permanent basis has been withdrawn. A temporary bill of indemnification, however, has been brought in with the full consent of the Government, so that no practical inconvenience will result.

THE PEERS AND MR. BARRY.

WE learn with gratification that our respectful remonstrance against undue haste in the completion of the new House of Peers,* to which the daily press gave increased circulation and weight, has received considerate attention in the proper quarter, and is likely to effect the desired end. Lord Brougham has since given notice that he will, on Monday next, name a day for moving an humble address to her Majesty, praying that she would be graciously pleased to order the preparation of the House of Peers for their lordships' occupation from the beginning of next session, *with temporary fittings*, and that care should be taken in providing the means of ventilating and warming the same; that all risk from fire should be guarded against by making the building fire-proof.

* See page 301 *ante*,

PAVING, CLEANSING, AND DRAINAGE.

A PUBLIC meeting of an association for the promotion of improved paving, cleansing, and drainage, was held on the 3rd inst. at the Hanover-square rooms, with the view of enforcing upon the public the fact, that if the streets, courts, and alleys of towns throughout the United Kingdom were properly swept and kept clean, not only would the accumulation of mud and dust be entirely prevented at a trifling expense, but employment could be given to 40,000 labourers. There were upwards of 500 persons present, including a number of ladies. On the platform amongst others were the Duke of Grafton (who presided in the unavoidable absence of the Duke of Cambridge), the Earl of Charlemont, Lord Ranelagh, M.P., Sir Burgess Carnac, P. Borthwick, Esq., M.P., C. Cochrane, Esq., the President and Founder of the Association, B. B. Cabbell, Esq., &c.

Mr. Cochrane, in detailing the objects of the association, divided his remarks into three distinct propositions, undertaking to prove, first, that the streets could be kept so clean, as to prevent the accumulation of any mud or dust; secondly, that by keeping the streets so clean, they might secure the employment of 40,000 of the able-bodied poor; and thirdly, that the public would be reconciled to pay any extra expense entailed by raising rates through the parochial authorities towards the accomplishment of these ends. (Cheers.) In proof of the first proposition, he referred to the experiments which were made last winter in Oxford-street and Regent-street, when those streets were kept so clean, that a lady's shoe would not be soiled in crossing at any part of them, whilst some of the adjoining streets were little better than quagmires. With regard to the second proposition, he stated that most accurate calculations had been entered into, which were open to the inspection of any one who wished to examine them, and from which it appeared that each man could keep an area of from 1,500 to 2,000 square yards perfectly clean. Upon that calculation, about 330 men would be required for the city of London, 80 for St. James's parish, 140 for St. George's, from 500 to 600 for St. Marylebone, and so on, giving throughout the whole country employment to at least 40,000 persons. (Cheers.) With regard to the third proposition, as to the expense, it had been calculated that in the city of London the expense entailed upon every housekeeper would be about 7s. per house per year, in addition to what was already paid; or, upon individuals, the expense would be from 1d. to 1½d. per head per month. Mr. Cochrane concluded by moving a resolution to the effect that it is essential to the community at large, in a sanatory, moral, and social point of view, that the greatest possible cleanliness should be maintained in the public thoroughfares.

Mr. P. Borthwick, M.P., moved a resolution to the effect that the improved system of cleansing the public thoroughfares, while it would relieve parochial burdens by securing employment for the poor, who were compelled for want of work to ask for parochial relief, would also tend to the more perfect preservation of buildings and monuments, theimprovement of the morals and health of the people, and would also effect a diminution in the losses to householders in furniture, goods, &c.

These resolutions, together with others of secondary importance, being carried unanimously, and thanks having been awarded to the noble chairman for his kindness in presiding and for his conduct in the chair, the meeting was dissolved.

NEWS FOR CHURCH BUILDING COMMITTEES.—An advertisement has lately appeared in one or two of the daily papers, stating that "A sum of money has been appointed by the will of a gentleman lately deceased, to be given (on certain conditions) in aid of the funds for building twelve new churches;" and informing parties wishing to put themselves in communication with the trustees how they can do so. The regulations of the stamp office do not allow us to publish the address of the party who advertises, but for the benefit of those who are interested in the bequest, the advertisement itself can be seen on applying to our publisher.

THE STRENGTH OF STONE COLUMNS.

LAST week we mentioned a paper on this subject read by Mr. E. Hodgkinson, at the late meeting of the British Association for the Advancement of Science (p. 316). Our contemporary, the *Athenæum*, gives the following additional notes:—

"*On the Strength of Stone Columns*, by Mr. E. Hodgkinson.—The columns were of different heights, varying from 1 inch to 40 inches; they were square uniform prisms, the sides of the bases of which were 1 inch and 1¼ inch, and the crushing weight was applied in the direction of the strata. From the experiments on the two series of pillars it appears that there is a falling off in strength in all columns from the shortest to the longest; but that the diminution is so small, when the height of the column is not greater than about 12 times the side of its square, that the strength may be considered as uniform, the mean being 10,000 lb. per square inch, or upwards. From the experiments on the columns one inch square, it appears that when the height is 15 times the side of the square the strength is slightly reduced; when the height is 24 times the base, the falling off is from 138 to 96 nearly; when it is 30 times the base, the strength is reduced from 138 to 75; and when it is 40 times the base, the strength is reduced to 52, or to little more than one-third. These numbers will be modified to some extent by the experiments in progress. In all columns shorter than 30 times the size of the square, fracture took place by one of the ends failing; shewing the ends to be the weakest parts; and the increased weakness of the longer columns over that of the shorter ones seemed to arise from the former being deflected more than the latter, and therefore exposing a smaller part of the ends to the crushing force. The cause of failure is the tendency of rigid materials to form wedges with sharp ends, these wedges splitting the body up in a manner which is always pretty nearly the same; some attempts to explain this matter theoretically were made by Coulomb. As long columns always give way first at the ends—shewing that part to be the weakest—we might economize the material by making the areas of the ends larger than that of the middle, increasing the strength from the middle both ways towards the ends. If the area of the ends be the area in the middle as the strength of a short column is to that of a long one, we should have for a column whose height was 24 times the breadth, the area of the ends and middle as 13·766 to 9·595 nearly. This, however, would make the ends somewhat too strong; since the weakness of long columns arises from their flexure, and increasing the ends would diminish that flexure. Another mode of increasing the strength of the ends would be that of preventing flexure by increasing the dimensions of the middle. From the experiments it would appear that the Grecian columns, which seldom had their lengths more than about ten times the diameter, were nearly of the form capable of bearing the greatest weight when their shafts were uniform; and that columns tapering from the bottom to the top were only capable of bearing weights due to the smallest part of their section, though the larger end might serve to prevent lateral thrusts. This last remark applies, too, to the Egyptian columns, the strength of the column being only that of the smallest part of the section. From the two series of experiments, it appeared that the strength of a short column is nearly in proportion to the area of the section, though the strength of the larger one is somewhat less than in that proportion.

Prof. Challis inquired whether Mr Hodgkinson had found the columns to give way chiefly in the direction of the cleavages of the stone? Mr. Hodgkinson replied that he had; and that hence the same size and shape of stone cut out of the same block, required very different forces to crush them across the grain from what they did with it. Prof. Stevelly said, that it was one peculiarity of Mr. Hodgkinson's researches, that they opened up so many collateral objects of interest and wide fields of inquiry. It was easy to see that the present researches might become important to the geologist, by leading him to the source from which originated the splitting up of extended rocks into beds and strata, and the contortions of them; for example, to some volcanic matter forced up vertically in such a manner as to exercise a crushing force upon even distant masses.—Prof. Willis shewed, by examples deduced from various styles of architecture, that the ancients must have been practically in possession of similar principles; and from several examples which he gave, it would appear that columns of a shape suited to these principles were again coming into use.

CHURCH OF THE HOLY TRINITY, BARNSTAPLE, DEVON.

THIS church, which was consecrated by the Bishop of Exeter on the 21st ult., is built in the style of the fifteenth century; the plan is cruciform and consists of a nave (without aisles) and transepts, a spacious choir and aisles. The tower, which is at the south-west angle of the building, is to be surmounted with a spire. The exterior walls are faced with a sort of sand-stone obtained in the neighbourhood; the dressings and windows are of Bath-stone.

The large west window is a copy of the beautiful window at St. Mary's, Oxford. On entering the church, the choir, which is raised several steps above the nave, is seen through three lancet arches which divide it from the nave; and the view is terminated by the eastern window of three lights filled in with stained glass, manufactered at Exeter by Mr. Bere. The arches and clustered columns between the nave and choir, are of Bath-stone; the two lateral arches being much narrower than the centre one; a low open panelled screen of oak between the piers of the arches divide the nave and chancel; the transepts which are lighted by windows of three lights, are divided from the nave by arches of stone springing from corbels; the nave is lighted on either side by four windows each of two lights; the mullions, tracery, and jambs, are of Bath-stone; the open timber-framed hammer beam roof, forms a principal feature on entering the church; the pulpit, reading-desk, and font, are all sculptured of Caen-stone by Mr. Rowe, of Exeter; the pulpit, and reading-desk, which are uniform, are placed at the easternmost angle formed by the junction of the nave and transepts, the pulpit being on the north side.

The pews are constructed of American oak; the framing is low, somewhat similar in construction to many of the old oak seats in the neighbouring churches, with the exception that they have a low door to each seat or pew, somewhat similar to St. Katherine's Church, Regent's Park; the pews will seat above 800 persons, out of which number 326 sittings are to be free for ever; there is a small gallery at the western end of the church, capable of holding 150 persons; the front is of oak panelled; the internal length of nave, 77 feet by 34 feet 10 inches; chancel, 27 feet by 16 feet; chancel aisles, 35 feet by 11 feet 6 inches; transepts, 16 feet by 14; height from floor to springing of roof 27 feet; to centre of roof, 56 feet; the east window is 15 feet high by 7 feet wide in three compartments; the four top compartments of the tracery represent the emblems of the four Evangelists; the remainder of the window is filled with stained and ornamental glass; the tower when completed will rise 100 feet with a spire on the top 56 feet high; there is ample room in the bell-chamber for eight bells; the lancet-windows in the north and south chancel aisles are also fitted with ornamental glass, that in the south has the emblems of the Alpha and Omega; that in the north, represents the three nails and a crown of thorns encircling "J. N. R. J.;" it is proposed to fill the west window with stained glass with emblematic representations of the twelve apostles, at a cost of about 200 guineas.

The font stands in the aisle near the western entrance, and has on the rim, in old English characters—"In the name of the Father, and of the Son, and of the Holy Ghost." An organ is in course of erection for the church by Houlditch of Soho, and will be completed within six months. The nomination of the minister is in the hands of the Rev. John James Scott (at whose sole expense this church was built and endowed), his heirs and assigns for ever.

The church is capable of holding 1,200 persons, and built at a cost of nearly 8,000*l.* when completed. The architects are Mr. G. Abbott, of Barnstaple, and Mr. D. Mackintosh, of Exeter.

NOTES IN THE PROVINCES.

A NEW church is about to be built in the Beddington-road, North Brixton, the neighbourhood of which has become a new village from the immense quantity of buildings which have been recently erected there.——It is said that the Roman Catholics have obtained a lease of a large portion of ground at the head of Bruntsfield Links, Edinburgh, for a seminary on an extensive scale. Their present college at Blairs will be removed to it. It is further stated that the plans, which are now out of the hands of the architect, include the design of a magnificent cathedral. The same religious denomination are about to erect a splendid church, school, and presbytery, or priest's residence, in the immediate neighbourhood of Burnley, at an estimated cost of about 6,000*l.*——It is in contemplation to erect a theatre in Bridgwater. Some of the most respectable inhabitants have started the project of building it by shares. The want of such a place of amusement has for a long time been complained of by parties visiting the town. —— A movement has been made in Newcastle, with a view to the establishment of a collegiate institution in that town, in connection with the London University.——The Committee appointed to superintend the rebuilding of St. Alkmund's Church, Derby, have issued a second appeal to their friends and the public. They require an addition of at least 1,500*l.* to the funds already subscribed, exclusive of 700*l.* for a spire——The Stockton and Darlington suspension bridge across the river Tees, near Stockton, which was opened to the public in 1830, is now nearly taken down, the engines, coaches, and waggons, have for some time past crossed the river on the new bridge, which is erected at a short distance, in a more substantial manner. The demolition of this structure, once an object of general admiration, attracted thousands of persons to the spot.——The present Widford Bridge, on the road between Chelmsford and Ingatestone, in Essex, having been pronounced unsafe, the county invited tenders for a new iron bridge, and Messrs. Cottam and Hallen, of Winsley-street, Oxford-street, obtained the contract at 730*l.* and the old materials. It is to be completed in about two months from the present time, under the supervision of Mr. Hopper. ——The Durham Victoria Harbour, erected at the expense of the Fishery Board and town of Dunbar, is now completed. The local committee have been so much satisfied with the unwearied attention and anxious superintendence of Mr. David Ross, the inspector of works, that they have presented him with a handsome watch, bearing a suitable inscription. The contractors were Messrs. David Lyon, and Co.——At a meeting of the Litchfield Diocesan Church Extension Society, which took place on the 17th ultimo, the following grants were made:—

To Brockmoor new Church, in Kingswinford	£250	additional.
To Leigh, for increase of accommodation.....	60	,,
To Boxley new Church, near Wednesbury	723	,,
To Biggin, in Hartington	300	conditional
Towards a parsonage, at Quarry Bank, in Kingswinford.....	200	,,
Towards Ditto, at Brown Edge, in Norton	200	,,
Towards increase of Endowment of Coleham, in St. Julian's, Shrewsbury	150	,,

——The committee for the erection of the new district church of St. Thomas, in the parish of St. John's, Coventry, have nearly brought their preliminary arrangements to a close. The town council have agreed to grant one acre and twenty-eight perches of waste land, situate in the Summerland Butts, for a site in accordance with the suggestion of Mr. J. L. Akroyd, whose plans are to be carried out. The extreme dimensions of the new building will be 43 yards long and 24 wide. It is to contain 700 free sittings.——On Saturday last the Birkenhead Dock Committee commenced driving piles on the Seacombe side for the new river wall, which is to extend across the mouth of Wallasey Pool. The first pile was driven about 20 yards from the Seacombe-slip.——On Tuesday week a meeting of the Yarmouth Haven and Pier Commissioners was held at their office, for the purpose of receiving tenders for the completion of the new drawbridge, according to the plans of Mr. Birch. The only tenders were, one from Mr. Peto, and another from Mr. Simpson. We have not been able to learn the precise amount of the tenders, but are assured that Mr. Peto's exceeded 32,000*l.*, while Mr. Simpson's was under 20,000*l.*——At the present time, in the diocese of Salisbury, the following new churches are in the course of erection:—At Chittoe, in the parish of Bishop's Cannings; Sedghill, in the parish of Berwick St. Leonard; Zeals, in the parish of Mere; and at Cholderton, near Amesbury. The following churches are undergoing thorough repairing and repewing, with a view to increase the accommodation:—Melsham, Tilshead, Stratton St. Margaret, Wanborough, and Stert, near Devizes.——The woolcombers of Bradford are prosecuting their inquiries with a view to the improvement of their dwellings, and thereby to increase their comforts, and to promote their sanatory condition. A meeting of a few of the most influential gentleman of the town was held in the Exchange on the 1st instant, for the purpose of assisting them.——At a meeting of the Yarmouth Church Trustees, held last week, it was resolved to expend the sum of 1,250*l.*, in the repairs recommended in the report of Messrs. Hilling and Norfor, the surveyors deputed to inspect the fabric of the parish church of St. Nicholas.——The Newport Harbour Commissioners, a short time since, addressed a memorial to the Trinity Corporation, representing the disadvantageous situation of the present lighthouse, and soliciting that a new lighthouse, of similar construction to those at the Maplin Sand and at Fleetwood, might be erected 1,650 yards S. by E. from the mouth of the Usk. It appears that the authorities at the Trinity Board suspended proceedings in the matter, pending experiments which are still in progress in respect of the best mode of obtaining a permanent foundation for structures in situations similar to that pointed out by the harbour commissioners of Newport; and the Trinity Board have instructed Mr. James Walker to "examine the said proposed situation, and to report his opinion as to the description of building which, in the event of the board's determining to accede to the prayer of the memorial, it may be most advisable to set up."——The general committee appointed at the last meeting of the Ipswich Town Council have elected a sub-committee, to whom is delegated the arrangements necessary to give *éclât* to the opening of the new custom-house. Several preliminary steps have been already taken, and measures are being adopted to raise the necessary funds by public subscription. The ceremony of the opening is fixed to take place on Monday the 21st of July: to be succeeded by a public dinner, and by aquatic sports, and a brilliant display of fireworks.——The annual report of the Health Committee of the Town-council of Liverpool, made a few days since, states that the operations of the baths and washhouses for the poor during the past year were of a most favourable character. After paying all expenses a surplus of upwards of 50*l.* was left. The new baths and washhouses now being erected in the north end of the town will cost nearly 7,000*l.*, they will not be opened till next year. The committee strongly recommend the erection of a third establishment in a central locality, and there is every prospect of its being carried into effect. Thus, while the Corporation of London have contributed only about 500*l.* towards a similar object, the municipal authorities of Liverpool have spent 10,000*l.*, and most likely they will soon devote 3,000*l.* or 4,000*l.* more to the same laudable purpose.——The railways are making such rapid progress in this country, that canal traffic cannot successfully compete with them. It is therefore proposed to convert certain of the canals into railroads. With this object in view, a meeting of the Kennet and Avon Canal Company was held on the 1st instant at the London Tavern, and on the 12th ult. the proprietors of the Ellemere and Chester Canals met for the same purpose. In both cases there is every prospect of the conversion being made.——The Admiralty having refused the promoters of the South Wales Railway Bill leave to carry the line over the Severn by means of a bridge, Mr. Brunel proposes to effect the object in view by means of a tunnel under the river.——At the Warwick Quarter Sessions, held last week, the presentment made at the last Sessions, stating "that the present prisons at Warwick ought to be removed, and that a new gaol and house of correction are necessary to be erected in a more eligible situation near to the town of Warwick," was confirmed on the motion of Sir John Mordaunt, bart., by a majority of two, there being 14 in its favour and 12 against it.

MANCHESTER, TEN CHURCHES ASSOCIATION.

A MEETING of the friends and members of this association was held last week, the Bishop of Chester in the chair. The report, which was read by the hon. secretary, traces the progress of the church-building spirit in Manchester during the last fifty years. In the first twenty years from 1745 to 1815, not one church was consecrated in that immense parish. From 1815 to 1825, two churches only were consecrated. From 1825 to 1835, five were consecrated, four of which were built out of the million parliamentary grant. From 1835 to the present time, the number of churches consecrated, or in course of erection, or about to be built, the money being already subscribed, is no less than twenty-eight, including the entire re-building of three on a greatly enlarged scale. In 1835, the number of churches in Manchester amounted to exactly thirty, it has consequently nearly doubled during the past ten years. From the treasurer's account, it appears that the receipts during the past year amount to 20,478*l.* 10s. and the expenditure to 20,183*l.* 12s. 9d. In the latter sum are the following items:—

Building of St. Bartholomew's Church	£4,392	11	9
,, St. Matthias	4,766	9	11
,, St. Silas	4,563	16	4
,, St. Barnabas	5,860	7	3

There is the sum of 300*l.* 19s. 3d. in the debit account of the association under the head of "Drawback on St. Barnabas's Church." This sum has been received since the general account was made up, and added to the balance in banker's hands, subscriptions promised but uncollected, and cash recently received, make a sum of 4,673*l.* 19s. 3d. to begin the current year with. The proceedings of the meeting terminated with a proposal to raise 25,000*l.* for the erection and endowment of six other churches.

CARPENTERS IN FRANCE.

THERE is much commotion at this time amongst the carpenters; they have published a circular, setting forth that the sum of 4f. a day, their established wages (in common with masons and others) for these twenty years past, is insufficient, and refuse to work for less than 5f.; giving as reasons for the claim, 1st. that through bad weather and want of work, they, in reality, have only to depend on about seven months out of the twelve; 2nd. the progressive increase of the cost of food and lodging, and 3rd. that they run more personal risk than other operatives. They further refuse to undertake any "task-work," or work to be paid by the piece, and call on the masters to abandon the practice. "Task-work," says the circular, "is the ruin of industry. It kills the good workmen, and induces bad construction. Task-work is sometimes undertaken by a bold, good workman, who strives early and late to effect what he has agreed to, but more often it is taken either by men in extreme want or boys, who know nothing of the matter." Large numbers of them still remain out of employ.

PROPOSED JOINT-STOCK COMPANIES.

THE following is a summary of bills applied for during the present session of Parliament, for which a subscription contract, or undertaking in lieu thereof, has been deposited in Private Bill Office:—

Description.	Estimated expense.	Capital stock.	Money to be borrowed.
	£.	£.	£.
Railways	92,921,779	94,812,813	30,276,983
Navigations and canals....	176,190	——	76,000
Waterworks.....	613,452	732,080	387,466
Ferries and Docks	1,653,000	1,000,000	1,100,500
Piers and Harbours	331,050	——	320,000
Bridges.....	49,500	22,000	7,333
Roads	3,558	——	——
	95,748,529	96,566,893	32,168,182

DR. RITTERBANDT'S INVENTION

TO PREVENT INCRUSTATIONS IN STEAM BOILERS.

The process consists merely in converting all the carbonate of lime into chloride of calcium, by the introduction into the boiler of a small quantity of chloride of ammonium. In this way, the lime remaining constantly in solution, the boiler cannot foul, and fuel is saved to a great extent. Nor is this the case merely with fresh water. Dr. Ritterbandt's experiments prove that when sea water is boiled, the first change is the liberation of carbonate of lime, the excess of carbonic acid being driven off by heat, and that the particles of that compound become nuclei for the adhesion of the crystals of common salt, &c., which begin rapidly to form in consequence. In preventing the formation of carbonate by the introduction of chloride of ammonium, the chemical effects of contact are obviated, and no salt can be deposited until the water is almost evaporated away. This invention will do away with the necessity of blowing off so very frequently, and will supersede the brine pumps, both attended with an excessive loss of heat and waste of fuel.

A NEW MODE OF PREPARING LEATHER.

To a commercial country like Great Britain, and indeed to the world at large, the manufacture of leather must always be a matter of the first importance, whether we consider its value in the construction of most implements of husbandry, its use in mechanical trades, in the multitude of innumerable engines and machinery of every description, and in our manufactures, or as an article of general consumption in the production of those things which conduce so much to our domestic comforts and necessities. The article of leather has always ranked in point of value and extent as inferior only to cotton, wool, and iron; indeed, some statistical writers have gone so far as to consider it equal, if not greater, than cotton. From this circumstance, and as, according to the statement of those practically acquainted with the subject, 170 to 180 parts of leather might be obtained from 100 parts of dry hide, instead of 50, if every part of the gelatinous tissue could be made to combine with a full proportion of tannin, some idea may be formed of the advantages to be derived from any improvement in the art of tanning. And yet notwithstanding these important facts, it is equally true that in this enlightened age, when almost every other branch of the arts has made such rapid strides towards perfection, little, if any progress has been made in improving the art of tanning.

A patent for "a new mode or method of more speedily and effectually tanning hides and skins" has been recently obtained by Dr. Turnbull. The inventor seems to have been impressed with the important fact, that a knowledge of the disease was necessary to the cure, and to have brought to the study of his subject great scientific knowledge and research. In his specification, which is now before us, in pointing out the various difficulties in tanning, he says: "In preparing the skins and hides for the tanpit, they are steeped for a considerable time in a solution of lime to remove the hair and epidermis. In this process, the skin imbibes a considerable quantity of lime, which has the effect of either removing from the hide, or skin, a portion of the gelatinous substance in the form of soluble gelatine, or of altering the gelatinous fibre, so as to render it incapable of speedily and effectually combining with the tannin or tannic acid, and the pores of the skin are so impregnated with lime, as to prevent the tanning principle from operating freely, or reaching the heart of the skins."

And, after enumerating other obstructions, he observes that the great object to be attained is "to find out some means of removing these obstructions and antagonist principles, and of bringing about a speedy and effectual combination of the gelatinous fibre of the hides or skins, and the tanning matter, and thus produce, in a short space of time, leather superior in weight, quality, and durability to any yet produced. The object of my improvements is to remove these difficulties and obstructions, either by extracting the lime with which hides and skins are impregnated in the process of removing the hair, or removing the hair and epidermis from the hides, or skins, without the use of lime, by means not hitherto attempted."

The doctor then states that by steeping the hides or skins in a mixture of sugar, or any other saccharine matter and water, for from two to four days, according to the size of the skin, the lime is entirely removed. "The action," says the doctor, "of the sugar and pyroxylic or wood spirit upon the lime is so rapid, that in the largest skins the lime is entirely removed and the skins are rendered fit to receive and imbibe the tannic acid, and thus the operation of tanning is perfectly accomplished in a very short time."

We know the immense prejudice which exists against all new methods of tanning, especially if the tanning is accomplished in a short time. This, we believe, has been engendered by the signal failure of almost every attempt at improvement. It is worth while therefore to inquire a little into the philosophy of the doctor's discoveries, and to endeavour to ascertain from known facts whether the doctor is likely to be more fortunate than his predecessors in the same line.

All great chemists have described lime as a solvent of gelatine; indeed the fact is easy of demonstration by placing a small quantity of pure gelatine or isinglass in lime water. No doubt therefore can exist when we reflect on the energetic action of lime on organic bodies, especially on animal tissue, that the destruction of a great portion of the most valuable part of the skin must be the result of employing lime in taking off the hair.

The means hitherto employed to extract the lime has been the application of an alkaline lixivium called "bate." This is composed of the dung of pigeons, and other domestic birds, but this mixture has been found not to remedy the evil, for the bate does not dissolve the lime, but merely destroys its causticity by converting it into carbonate or chalk. Besides which it causes the destruction of a portion of the gelatineous tissue by the fermentation created by the decomposition of the animal matter in the bate.

Sugar, on the contrary, is well known to be a great preserver of the gelatinous fibre; our domestic experience proves this beyond controversy, and it has been demonstrated by Mr. Ramsay, of Glasgow, in a series of experiments published in "Nicholson's Journal" for 1807, that sugar is a powerful solvent of lime. We think therefore that we see in the doctor's discovery the means of removing "the antagonist principle, and of bringing about a speedy and effective combination of the gelatinous fibre with the tanning matter," and that the public may safely conclude that the doctor has been fortunate enough to discover the application of a remedy for an evil which has long baffled the skill of chemists and others, and which will go far to realize the enormous advantages in the quantity and quality of leather, to which we have before alluded.

THE WOOD-CARVERS.—At a general meeting of the profession of wood-carvers, held April 4th, 1845, it was moved by Mr. R. Moore, "that the services of Mr. W. G. Lock, wood-carver, in conducting the correspondence with her Majesty's commission on the fine arts, relative to the decoration of the new Houses of Parliament, on behalf of the wood-carvers, have entitled him to the warmest approbation of the profession. And this meeting, desirous to testify its estimation of the same, recommends a voluntary subscription throughout the profession, to present him with a suitable acknowledgment of the same." The motion was seconded by Mr. Gray, and carried unanimously. A committee of nine gentlemen were appointed to receive the subscriptions, and to decide on the nature of the testimonial, &c. Subscriptions were received from 221 wood-carvers, residents of London, Dublin, York, Cambridge, Hull, Manchester, Brighton, Leeds, Peterborough, Warwick, Leamington, &c. The result has been that the committee have publicly presented to Mr. W. G. Lock a splendid watch and appurtenances, engraved with a suitable inscription commemorative of the same. Mr. Lock has for some time past been acting as honorary secretary to the general body of wood-carvers, metropolitan and provincial, who have been in correspondence with the royal commission upon the subject of the decoration of the new Houses of Parliament with wood-carving.

Correspondence.

THE ROUND TOWERS OF IRELAND.

SIR,—Will you permit me, through the medium of your paper, to make one or two observations to the writer of a letter in THE BUILDER of June 28, on the round towers of Ireland, signed "J. K."

Your correspondent says that they doubtless were intended originally for the convenience of the architects employed in constructing churches, for he says, "That the towers and churches are invariably found together." Now, if he means to say that the towers are only to be found near churches, I can only say, that I have not found such to be the case. I have had occasion to visit Ireland frequently, and of course those memorials of the past, concerning which there is so much doubt occupied no small share of my attention. I have examined them carefully, and have not the least doubt as to their being of the same date as the buildings they adjoin. But I have found them near the castle quite as often as the church; so that I do not think they were originally built by the architect merely to protect his workmen and suit his own convenience, far from it. That they were erected as reconnoitring towers no one can doubt, but not for the special use your correspondent seems to think. They were intended as part and parcel of the building about to be raised (be it castle or church), as a necessary appendage for the safety and welfare of the inmates of the main building; the stability of the workmanship is a sufficient proof that it was for no temporary purpose, but to last for ages. Further, I have observed that in nine cases out of ten they are within sight of others; so that in case of a general enemy appearing, signals to that effect might be conveyed from place to place, to rouse the natives to arms to repel the invading foe. Trusting you will pardon this intrusion on your time and attention, and give publicity to these few remarks,—I am, Sir, &c., VERITAS.

NEW DOORS AT YORK MINSTER—STONE USED AT HOUSES OF PARLIAMENT.

SIR,—Perhaps it is only justice, in reference to your accurate and explanatory engravings of the western doors, York Minster, to name, that the framing and plainer portions were made by Mr. James Wallace, of Newcastle-upon-Tyne, and the carving by Mr. Scott of the same place; the latter artist is one of the best carvers in wood of the present age, and is also an expert modeller.

To clear up a doubt will you have the goodness to state what kind of stone *the external ashlar work* in the new Houses of Parliament is composed of — whether lime or sand-stone? I mean the *plain portions*, without reference to the carved surfaces. F. TYRRELL.

Tynemouth, near Newcastle.

*** Magnesian lime-stone, from quarries between Worksop and Mansfield, in Yorkshire, and called Anston or Norfal stone.

PROPOSAL TO CONVEY LETTERS 100 LEAGUES PER HOUR.—An original, if we cannot call it a clever, idea was communicated to the Paris Academy of Sciences on the 23rd ult. by the Baron de Colonge an attaché of the French legation in Bavaria. The rate he proposes to convey letters is not so quick as that of the English inventor, who has taken out a patent for conveying them at the rate of 400 miles an hour through an exhausted tube, like Mr. Vallance's tunnel, which was to transport passengers from London to Brighton in 10 minutes; but it is quick enough—and how does the scientific baron propose to accomplish his feat? Listen, gentle reader, and wonder at the progress of science in this nineteenth century. He would build small houses as stations, and provide each of them with a revolving lever, 300 feet long, which should throw the mail to the next station, and so on along the whole line. Would it not be more easy to adopt the school-boy plan of trap and ball? We need not say that the Academy attached little importance to the communication of the Baron de Colonge, and that it is not probable a committee will be appointed to examine and report upon his scheme.

Miscellanea.

PROPOSED NEW CHURCH AT SEACOMBE.—The amount required for the erection of this church is 3,000*l.* of which 2,364*l.* have been already contributed. So much difficulty exists in obtaining the remaining 636*l.* that the rector of Wallasay (Dr. Byrth), at a meeting held at Parry's Hotel last week, stated that 500*l.* of the amount subscribed was placed entirely at his disposal, and that if by the 10th of August next, the remainder of the money was not provided, he should proceed to build Day, Sunday, and Infant Schools, on a large scale, near his own church. He also said that a further portion would be withdrawn, and applied to the building of an Infant School in another part of the parish. He subsequently stated that a personal friend of his had allowed him to say, that if the subscription came within 100*l.* of the sum required, he would add that amount to his already very liberal donation. Another conditional grant of 100*l.* was made by Mr. Mainwaring, leaving 436*l.* still deficient, for lack of which sum, there is every probability that Seacombe for the present will remain without a church.

LABOUR PROVIDED BY RAILWAYS.—That some idea may be formed of the immense stimulus the trade of the country would derive from the formation of the contemplated railways, it is only necessary to state, that were 2,000 miles of the projected railways to be constructed, it would give employment to 500,000 labourers and 40,000 horses for the next four years. The necessary buildings, sheds, and permanent ways, would cover 20,000 acres of land, and to lay a double line of rails would require 400,000 tons of iron—*Bristol Journal.*

NOTICES OF CONTRACTS.

[We are compelled by the interference of the Stamp Office to omit the names of the parties to whom tenders, &c., are to be addressed. For the convenience of our readers however, they are entered in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent-garden.]

For Building a New Farm-house at Swavesey, Cambridgeshire.

For 1,000 Tons of Scotch Pig Iron, and 500 Tons of Finers' Metal, to be delivered at Rotterdam in the months of July, August, and September.

For Building a New Church of Kentish Rag Stone and Caen Stone at Homerton (time extended).

For the pulling down the present School House and erecting a new one at Chesterfield, Derbyshire.

For Lighting the town of Devonport with Gas for a term of fourteen years, to commence from the 1st day of October next.

For Building a Sewer of the first class (in length about 1,700 feet), at Little Chelsea, for the Parish of St. George, Hanover-square.

For the Construction of Four divisions of the Chester and Holyhead Railway, comprising the entire line through the County of Anglesey.

For the Erection of a Church at Zeals, in the parish of Mere, Wilts.

For the Erection of a Church at Merthyr Tydvil, in the County of Glamorgan.

For Building Sewers in the Old Bailey, Hanging Sword-alley, and Crown-court; also in John-street, Crutchedfriars, and Cullum-street, all being within the City of London.

COMPETITIONS.

Plans are required for Laying out and covering with Villa residences about 20 Acres of land having a frontage of about half-a-mile to the Queen's-road, Richmond, Surrey, extending from Spring-grove towards Richmond-hill. Premiums will be given of 25 guineas for the most approved plan, and 15 guineas for the second.

TO CORRESPONDENTS.

"J. C. S."—*Mr. C. J. Richardson's works are the best on the subject named. Weale, of Holborn, would give particulars if applied to.*

"B. C."—*We will make inquiries on the subject suggested.*

"W. A." (Yorkshire).—*The Rev. H. Carrow, Loxton Rectory, near Cross, Somersetshire, has been named to us as likely to afford the education sought. If terms be too high for the inquirer's views, Mr. Emberton, Croydon, Surrey, might be applied to.*

"A Constant Reader" (Aldgate).—*Much would depend on the instructions that were given and the nature of the specification. We might mislead him by replying in ignorance of these.*

"J. J." (Belfast).—*We are obliged to him for the enclosure, but have not yet had time to examine it. An account of the scaffolding, if peculiar, would be acceptable.*

"Col. M." *has our best thanks for his kindness.*

"Mr. Wood."—*A parcel is left at the office: it shall be forwarded if Mr. W. will oblige us with his address. Many apologies are due to him.*

"D. M."—*The notice which appears in to-day's* "BUILDER," *was in type before the arrival of our correspondent's parcel. We believed it to be from him.*

"A Subscriber" (Paddington), "J. L.," "Tenders," *and* "D. F.," *next week.*

Received: "*J. D.*" (Bath.)—"*The Pictorial Gallery of Arts,*" *Part VI.* (*C. Knight*), —"*Old England,*" (*C. Knight*), —*Young's* "*Lectures on Natural Philosophy,*" *edited by Kelland,* (*Taylor and Walton*), —"*The Illustrated Family Journal,*" *Part IV.* (*Sherwood*), —"*The Illuminated Magazine,*" *No.* 1 *of new series* (*a very good specimen*), *and the Natural System of Architecture as Opposed to the Artificial System of the present day, by W. P. Griffith, F.S.A., to which we shall refer shortly.*

ADVERTISEMENTS.

TO ARCHITECTS AND SURVEYORS.

THE VESTRYMEN OF RICHMOND, SURREY, are desirous of obtaining PLANS for laying out and covering with Villa Residences about 20 acres of Land having a frontage of about half-a-mile to the Queen's-road, Richmond, extending from Spring-grove towards Richmond Hill, and within a few minutes' walk of the Terrace there. The Plans will be expected to include the laying out of grounds and suitable offices, but it is not expected nor required that the elevations shall be uniform. — PREMIUMS will be given of TWENTY-FIVE GUINEAS for the most approved plan, and FIFTEEN GUINEAS for the second.—Lithographic plans of the ground and further particulars had on application to Messrs. SMITH and SON, Solicitors, Richmond, to whom the designs are to be sent before the 14th day of August next.

SMITH'S PATENT SASH SUSPENDER, or SASH-CORD SHIELD.—Its purposes are for releasing cords from windows, giving a facility to take the sashes out, or to turn them for cleaning or repairing inside the room, thereby avoiding any accident, of which many daily occur from the present dangerous method of conducting these operations on the outside. The price within the reach of all classes—only One Shilling a pair for each sash.—To be had, with instructions, of all Ironmongers, or of the Proprietor, W. SMITH, Architect, Alnwick, Northumberland.

TO ARCHITECTS AND BUILDERS.

G. BARTLETT, ARCHITECTURAL MODELLER, 33, DUNCAN-TERRACE, CITY-ROAD, begs leave respectfully to inform Architects, Builders, and others, that they may be supplied with any quantity of Cement and Plaster ornaments from his unlimited collection, consisting of Centre Flowers, Soffits, Bed Mouldings, Pateras, Trusses, Scrolls, Ballusters, Gothic and other Shafts, Grotesque Heads, Chimney-Pots, Corinthian and Ionic Capitals, Vases, Figures, Fountains, and every description of ornament for parks and gardens, at unprecedented low prices for cash.

THE CAUSES of EXPLOSIONS in STEAM-BOILERS, and the prevention of those arising from incrustation, is now lectured upon by Dr. Ryan daily at half-past Three, and on the Evenings of Monday, Wednesday, and Friday at Nine, at the ROYAL POLYTECHNIC INSTITUTION. Professor Bachhoffner, lectures daily at Ten o'clock, and on Tuesday and Thursday Evenings at Nine, on the ATMOSPHERIC RAILWAY, a Working Model of which, carrying visitors, is exhibited daily and in the Evenings. A curious MECHANICAL HAND; new and beautiful Objects in the Chromatrope, Physioscope, Proteoscope, and Dissolving Views. Working Models described. Experiments by the Diver and Diving-Bell, &c., &c.—Admission, One Shilling; Schools, half-price.

PRIZES IMPORTANT TO INVENTORS AND PATENTEES.

A GOLD MEDAL, value 100*l.* and a SILVER MEDAL, value 50*l.*, will be given by Mr. M. JOSCELIN COOKE. The Gold medal for the best Patent, and the Silver medal for the best Design taken out or Registered at the OFFICE for PATENTS and DESIGNS, 20, Half-Moon-street, between the 1st of November, 1844, and the 1st of June, 1846. The Prizes will be awarded by competent judges on the 10th June, 1846. The conditions to be observed, together with instructions, charges, and every information for obtaining Patents in England or Foreign Countries, or Registering Designs, will be forwarded gratis, on application to Mr. M. JOSCELIN COOKE, at the Office for Patents and Registration of Designs, 20, Half-Moon-street, Piccadilly, London.

FREESTONE. — Noblemen, Gentlemen, Engineers, Architects, Railway-Contractors, Builders, Grainstone-cutter, and others, are respectfully reminded of the admirable Freestone (a perfect oolite), which may be obtained at the LITTLE CASTERTON QUARRY. The inducements for using this Freestone consist in its property of resisting the most intense frost, the facility with which it is wrought, and consequent great saving of expense, the uniformity and beauty of its colour and texture and its low price. It has been used and approved for many years past by some of the first Architects in the Kingdom, and is now being used in the Stations on the line of the Blisworth and Peterborough Railway. The Quarry is situate in the County of Rutland, about one mile from Stamford and the River Welland, six from Wansford and the Nene, about ten from the Bourn Eau, and the same distance from the Oakham Canal. It would be delivered by Land Carriage in Blocks of any portable size, at a charge of one halfpenny per cubic foot per mile in addition to the price at the Quarry.—Apply to FRANCIS SIMPSON AND SONS, Stamford.—July, 1845.

CAEN STONE.

LUARD and BEEDHAM have a quantity of the above stone, of the best quality, direct from their Quarries at Allemange, which may be inspected at the Norway Sufferance Wharf, Greenwich.—Further particulars at MR. G. GATES', 18, SOUTHWARK-SQUARE, SOUTHWARK.

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T. E. WELLER, of STEEL-YARD WHARF (late Drewe's), begs to inform Stone Merchants, Contractors, &c., that he can supply them with best FARLEIGH-DOWN STONE on lower terms than ever before offered.—Depôt for immediate supplies, DRUCE'S WHARF, Chelsea.

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Caution. As several imitations of the above are offered for sale by different makers, Architects, Builders, and the Public are respectfully informed that no Ironmongers, Smiths, or Brokers are supplied with the above Doors or Safes; and that they can only be obtained direct from C. Chubb & Son, 57, St. Paul's Churchyard, London.

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Ditto Elliptic do. at 3½d. and 4d. do.

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TO ENGINEERS, ARCHITECTS, AND CONTRACTORS.

GREAVES'S LIAS CEMENT and GROUND BLUE LIAS LIME, at 2, South Wharf, Paddington, London, and Works, Southam, Warwickshire.

Agent for Liverpool, Mr. WYLIE, 56, Gloster-street; ditto for Manchester, Mr. J. THOMPSON, Back King-street; ditto for Chester, Mr. J. HARRISON, Linen Hall-street.

ATKINSON'S CEMENT.—The public is respectfully informed, that the price of this very excellent Cement, which has now been in use for Architecture and Engineering works upwards of thirty years, is reduced to 2s. 3d. per bushel, and may be had in any quantity at Wyatt, Parker, and Co.'s Wharf, Holland-street, Surrey side of Blackfriars-bridge.

N.B.—This Cement being of a light colour, requires no artificial colouring or painting, and may be used for stucco with three parts its own quantity of sand.

MARTIN'S PATENT CEMENT.

TO ARCHITECTS, BUILDERS, AND PAINTERS IN FRESCO.

STEVENS and SON, PATENTEES and SOLE MANUFACTURERS, beg respectfully to announce that this beautiful cement has now arrived at a degree of excellence far surpassing their most sanguine expectations. For all internal work it possesses a great superiority over every article hitherto in use; it is now being used extensively by Government in the British Museum and other public buildings. IT DOES NOT THROW OUT ANY SALT, but presents a beautifully plain and perfect surface, which may be painted upon dry work within four days without peeling. It is equally applicable for walls or lath, for mouldings, architraves, skirting, or flooring; and is admitted to form the best ground for fresco painting, having been used for many of the prize frescos lately exhibiting in Westminster Hall. It will bear an intense heat without cracking, and for hardness, durability, and economy, cannot be equalled.

186, DRURY-LANE, LONDON.

Agent for Liverpool and Manchester, Mr. R. Part, 11, Atherton's-buildings, Dale-street, Liverpool.

KEENE'S PATENT MARBLE CEMENT.—The Patentees of this composition beg to refer to the British Museum, the Royal Exchange, the new works at Bethlem Hospital, Greenwich Hospital, and the Coliseum in the Regent's-park, as buildings finished or in progress, in which Keene's Cement has been used as an internal stucco. Its superiority to common plastering consists in its extreme hardness, and the rapidity with which it dries, which qualities fit it to receive paint or other finishing sooner than other water Cement.

When employed for skirtings, architrave, and other mouldings, in place of wood, it checks dry-rot, is impervious to vermin, prevents the spread of fire, and is more economical in its application than the material for which it thus becomes the substitute.

Confirmation of these statements is to be found in the almost universal adoption of Keene's Cement for Skirting and Hall flooring in the new houses on the Hyde Park Estate, where its application is to be seen to the fullest advantage.

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The high polish and marble-like hardness of which this Cement is susceptible render it the most suitable material for the manufacture of Scagliola.

Patentees, J. B. WHITE & SONS, Millbank-street, Westminster, Manufacturers of Roman and Portland Cement.

Depôt in Liverpool, 36, Seel-street; James Woods, Agent.

TO ARCHITECTS, ENGINEERS, CONTRACTORS, BUILDERS, MASONS, AND PLASTERERS, MERCHANTS, SHIPPERS, AND THE PUBLIC IN GENERAL.

JOHNS and CO.'S PATENT STUCCO CEMENT.—The following are the positive advantages possessed by this Invention over every Cement hitherto introduced:—It will effectually resist Damp. It will never vegetate nor turn green, nor otherwise discolour. It will never crack, blister, nor peel off. It will form a complete Stone casing to any Building covered with it. It so closely resembles Stone that it is impossible to detect it. It never requires either to be painted or coloured. It will keep fresh and good in the cask in any Climate for any number of years. It is the only Cement that can be depended upon for export. It is the only Cement that can be used with confidence by the Sea-side. It may be used in the hottest or coldest Climates at any season. It will adhere to any substance, even to Wood, Iron, or Glass. It will carry a larger Proportion of Sand than any other Cement. It matures by age, and becomes perfect when other Cements begin to perish. It may be worked through the Winter, as frost has no effect upon it. It may be used on the Inner Walls of new Houses, which may be papered over or painted directly. Roofs laid or pointed with this Cement will remain undamaged by the severest Storms. Any Plasterer may apply it, the Instructions for use being very clear and distinct. The first cost of this material does not exceed that of the cheapest Cement now in use; but with all the above-named extraordinary and valuable advantages, nothing can approach it in point of economy.

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JOHNS and CO.'S PATENT STONE-COLOUR STUCCO PAINT, expressly intended for Painting over exterior Walls of Houses that have been covered with Roman or other Cements, and which have become dirty and discoloured. It is in every way better suited for this purpose than White Lead Paint, which will frequently come off in flakes, being in direct chemical opposition with Cement; whereas MESSRS. JOHNS and CO.'S PATENT PAINT having an affinity for Stucco, binds itself with it, stopping the suction, thereby rendering the wall proof against weather, and in the finish producing a pure stone-like effect, producealbe by no other Paint whatever. It is cheap in its application,—and may be used by any Painter, in any climate, even in the most exposed Marine situations.

PATENT METALLIC SAND CEMENT, requiring no Colour or Paint, and free from Cracks and Blisters. Mixed ready for use at 8s. 6d. per cask. 2s. 6d. allowed for each cask returned in good order. 2½ bushels common sand to be added to each cask of Metallic Cement, which will float fourteen square yards Stucco. Apply at the Metallic-Cement Wharf, King's-road, Camden New Town (opposite Pratt-street), London.

NOTICE TO INVENTORS.

OFFICE FOR PATENTS OF INVENTIONS and REGISTRATIONS of DESIGNS, 14, Lincoln's-inn-fields.—The printed INSTRUCTIONS gratis, and every information upon the subject of PROTECTION for INVENTIONS, either by Letters Patent or the Design Acts, may be had by applying personally, or by letter, prepaid, to Mr. ALEXANDER PRINCE, at the office, 14, Lincoln's-inn-fields.

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Tar Brushes and Masons' Brushes, and all other Brushes used by Painters and Artists.

Lists of Prices of Painting Brushes, and of all other kinds of Brushes, forwarded on application. Established 1777.

WINDOW GLASS, MILLED LEAD, and COLOURS, Pumps, Closets, Pipe, Basins, Brushes, Dry Colours, Ground ditto, and all materials at the lowest wholesale prices for cash.

Crown sqr. not exceeding 12 by 10, 5d. per foot.
Sheet squares, not exceeding 12 by 10, 6d. per foot.

White Lead.	Milled Lead cut to size.
Linseed Oil.	Pan Basins.
Turps.	Plumbing, Brass
Warranted Varnishes.	Work, &c.

Superior Spruce Oker, for Plasterers and Painters, at 6s. per cwt. Gilders, Print Publishers, Picture Frame and Cabinet makers supplied with patent sheet, plate, and sheet, and flatted glass of superior colour, and carefully selected.

SURVEYORS, CONTRACTORS for PUBLIC WORKS, and the TRADE generally, sending specifications of quantities required, will receive by return of post an invoice at the very lowest cash prices. — For complete lists (priced) apply to R. COGAN, 5, Princes-street, Leicester-square, London.

Also may be had, Wholesale and Retail,
LAMP SHADES AND GAS GLASSES.

Gas Contractors, Fitters, Glass Merchants, and others supplied with any description. Lists of nearly 100 patterns, with prices affixed, sent to any part of the kingdom gratis.

CLOCK MAKERS, ALABASTER FIGURE MAKERS, ARCHITECTS, MODELLERS, and others, supplied with FRENCH ORNAMENT SHADES,

for covering Models of Public Buildings, Geological Curiosities, &c., &c., of all sizes and shapes. List of Prices may be had on application. Bee Glasses, Striking Glasses for Nurserymen, Fish Globes and Confectioner's Glasses, &c., of every size and description.

TO DECORATORS, GRAINERS, PAINTERS, PAPER-STAINERS, ARTISTS, AND OTHERS.

STEPHENS' PREPARED IMITATION WOOD COLOURS.—The want of a uniform system of preparing colours for imitating wood in painting, in which a correct shade and tone of colour are equally important with skilful execution on the part of the operator, is often productive of serious inconvenience to the workman. Accustomed to mix on the spot various proportions of different colours, and using them when the eye has approved of the mixture, he is subjected to delay and the inconvenience of repeated trials, in order to match the colour, should he not have mixed sufficient to finish his work, or should he be desirous of imitating it correctly at any subsequent period. To relieve this inconvenience, the inventor has prepared Imitation Wood Colours upon such exact principles that the operator will be able to obtain correct imitations at once, prepared to his hand, thus saving time and preventing uncertainty. These colours have also the advantage of a finer and more natural appearance, are perfectly free from gritty particles, and work more smoothly and more pleasantly than any of the colours now in use, thereby effecting a saving in time and labour, and producing a more beautiful and perfect imitation of the ornamental woods than can be obtained by any of the crude colours which workmen are in the habit of using.

N.B. The above colours are prepared both in a dry and damp state. The Damp Colours are convenient for immediate mixing without grinding, for Paper Staining, and Graining in Distemper. Damp Colours sold in Pots, 6d., 1s., and 2s. each. Dry Colours sold in Packets at 6d., 1s., and 2s.

As a valuable adjunct to the above, STEPHENS' NEUTRAL WHITE will be found a very superior article for mixing with fine Colours, as its chemical nature is not incompatible with any colour, and it also works smoother and better than any of the Whites commonly used for such purposes. Also STEPHENS' LIQUID OAK, MAHOGANY, and ROSE and SATIN WOOD STAINS, for reviving the faded appearance of old Carvings and Furniture, and also for staining and Colouring Soft Woods, Composition, Paper, Leather, &c., so as to imitate the Colours and appearance of Oak, Mahogany, &c. &c. Prepared and Sold by HENRY STEPHENS, 54, Stamford-street, Blackfriars-road. Sold also, by appointment, at E. M. NASH'S, 47, Marshall-street, Golden-square. Specimens of the application of the above articles may be seen at either of the places above named.

POLONCEAU'S BITUMEN PAVEMENT for paving Foot walks, Terraces, Garden walks, Stables, Coach Houses, Granaries, Corn Stores, and Salt Warehouses. For the exclusion of Damp and Vermin in Basements it is particularly adapted, and for Roofing Dwelling Houses, Porticos, Balconies, and Sheds.

Price 3s. 6d. per square yard.

BITUMEN for covering the Arches of Bridges, Culverts, &c. &c. on Railways and other places (with instructions for laying it down), may be had at the rate of 45s. per ton, by applying to JOHN PILKINGTON, 15, Wharf-road, City-road.

BASTENNE ASPHALTE and BITUMEN COMPANY, Offices, 31, Poultry. The Directors of this Company beg leave to call the attention of ARCHITECTS, BUILDERS, and others, to the very beneficial results attendant on the use of BITUMEN in the erection of buildings, &c. Its application as a FLOORING will be found eminently useful. It is also valuable for numerous other purposes, more particularly where the object sought for is the EXCLUSION OF DAMP AND VERMIN. The Directors beg to refer to the works in Trafalgar-square, which have given general satisfaction. Scale of prices per foot square:—1 inch thick, 8d.; 2 inch thick, 7d.; ½ inch thick, 6d. Works not measuring 400 feet, 1d. per foot extra. Roofing executed at 6d. and 7d. per foot square. Concrete is charged in addition according to the thickness when required. Carriage and men's time are charged extra when works are executed beyond three miles from the General Post-office. Bitumen £6 per ton, without grit. Bitumen £5 per ton, with grit.

CHARLES F. TILSTONE, Sec.

TO ARCHITECTS.

IN consequence of many complaints having been made to the Company, by Architects, of a spurious material having been used in the execution of Works where the SEYSSEL ASPHALTE had been specified for, the Directors, with a view to ensure the fulfilment of any such specification, have authorized CERTIFICATES to be granted to Builders where the

SEYSSEL ASPHALTE

has been used. For the purpose of securing the use of the Genuine Article, Architects and others are recommended to insert in their specifications the "Seyssel Alphalte, Claridge's Patent," and not merely "Asphalte," or "Bitumen," as in many cases where these terms have been used, gas-tar and other worthless and offensive compositions have been introduced.

I. FARRELL, Secretary,
Stangate, near Westminster Bridge, Jan., 1845. Seyssel Asphalte Company.

Books of Instructions for Use may be had at the Office of "The Builder," and of all Booksellers in Town and Country, price 1s.

*** In proof of the necessity of the above advertisement, it may be mentioned, that it has come to the knowledge of the Directors, that in certain works which have been executed by Messrs. Curtis, builders, of Stratford, a spurious material has been used by them, contrary to the specifications, which expressly mentioned, that "Claridge's Asphalte" was to be used.

In the case of a work at Lewisham executed by MESSRS. ROBERT and DANIEL YOUNG, of 10, Crown-row, Walworth-road, where Seyssel Asphalte was specified for, a spurious article was nevertheless laid down by them.

VENTILATION.

"A most ingenious, simple, and effective plan." Mr. Reid's Lecture on Ventilation, delivered, June 7, 1845, before the Mechanics's Institute, Liverpool.

BAILLIE'S PATENT TRANSPARENT VENTILATOR, ventilates rooms or public buildings without causing unpleasant draughts of air—may be fixed as easily as a pane of glass, whose place it supplies—does not derange blinds, shutters, or other fixtures belonging to windows—most useful to public places of every description, especially smoking and coffee rooms, and moreover a simple remedy for smoky chimneys. This article may be obtained from Messrs. Chater and Hayward, St. Dunstan's-hill, and all respectable glass dealers in London; Mr. Edgar Parks, ironmonger, 140, Fleet-street; Messrs. Stock and Sharp, and Mr. Samuel Beale, Birmingham; Messrs. John Hall and Sons, and Messrs. Dixis and Williams, Bristol; Messrs. Thos. and Will. Stock, Liverpool; Messrs. Davidson and Armstrong, Manchester; Mr. James Bell, Glasgow, &c.; who have models to explain its action, and will be glad to give any further information; also to be seen in use at Mr. Fred. Smith's, the Albion, 259, Blackfriars-road; Mr. Edward Baillie's, 12 B, Cumberland-market, Regent's Park; Mr. Seaton's, Dublin Castle, Park-street, Camden Town; 2, Coleman-street-buildings, Moorgate-street, and at the office of this Paper.

By Royal Letters Patent.

PATENT IMPERVIOUS WOOD AND COMPOUND CORK FLOORING.
PATENT ASPHALTE AND BITUMEN WORKS.
MILL WALL, POPLAR, AND NO. 19, MINORIES, ALDGATE, LONDON.

E. E. CASSELL and CO. beg most respectfully to call the attention of Engineers, Architects, Surveyors, Builders, and the Public generally, to their Patent Impervious flooring, requiring no rafters, impervious to wet or damp, not liable to rot, and for durability and cleanliness, it is well adapted for Kitchens, Cellars, Warehouses, Barns, Granaries, Stables, &c., &c.

E. E. C. and Co. also specially beg to call the attention of Railroad Contractors, Builders, Surveyors, &c., to their Patent Asphalte or Bitumen, which has now been in use upwards of Ten Years. It is well adapted for Covering Arches, for the prevention of damp. As a Cement it is particularly applicable to Hydraulic Works and foundations of heavy Buildings, Ground Flooring, &c.; Asphalte laid for Foot-paths, Kitchens, Cellars, &c., within Four Miles of the Royal Exchange at 3s. 9d. per square yard. Applications by letter prepaid; testimonials where their Asphalte has been in constant use for upwards of Seven Years without requiring repairs, indisputable evidence can be adduced and forwarded with a List of Prices, &c.

CAUTION.

E. E. C. and Co.'s Patent granted them for Fourteen Years, dated 17th October, 1834. Those who may illegally Manufacture, Use, or Vend, any imitative Asphalte, without E. E. C. & Co.'s License or Authority, will be liable to Legal Process, as will be shewn by documents given by the highest legal and scientific authorities,—the Attorney General, Sir. J. Campbell, David Pollock, Esq., Barrister-at-Law, and the late J. F. Daniell, Esq., Professor of Chemistry, &c. &c.

N.B.—Asphalte supplied to Railway Contractors and Builders in ½ cwt. Blocks, for convenient conveyance to all parts of the United Kingdom, at 45s. per ton.